SCOTTISH EDUCATION DEPARTMENT: 1963

The following is a List of some of the more important Official Publications of the Department relating to the Scottish Certificate of Education Examination and to the teaching of particular subjects in Senior Secondary Schools. They cannot be purchased from this Office, but can be obtained, either directly from HER MAJESTY'S STATIONERY OFFICE (Scottish Branch), 13A Castle Street, Edinburgh, 2, or through any bookseller. All prices are not, those in brackets including postage.

Circular 30 (14th November 1962). Relating to the conduct of the Scottish Certificate of Education Examination of 1963. 3d. (6d.).

Scottish Certificate of Education. Examination Arrangements, 1963. 5s. 6d. (5s. 11d.).

Introduction of the Ordinary Grade of the Scottish Leaving Certificate. Report of the Working Party on the Curriculum of the Senior Secondary School. 3s. 6d. (3s. 10d.).

The Post-Fourth Year Examination Structure in Scotland. Report of a Special Committee of the Advisory Council on Education in Scotland. 1s. 3d. (1s. 6d.).


Circular 424 (December 1959). Introduction of Ordinary Grade Examination. Syllabuses and Specifications, Question Papers and other Arrangements. 6d. (9d.).

Circular 452 (February 1961). Date of the Scottish Certificate of Education Examination and Conditions for the Award of the Certificate. 6d. (9d.).

Circular 459 (April 1961). Scottish Certificate of Education: Mathematics on the higher Grade. 1s. 6d. (9d.).


Circular 480 (September 1961). Scottish Certificate of Education (relating to changes in Science Subject on the Higher Grade from 1963). 1s. 3d. (1s. 6d.).


Circular 490 (April 1962). Scottish Certificate of Education. Alternative Physics—Ordinary and Higher Grades. 3s. 6d. (3s. 10d.).


Circular 512 (October 1962). Scottish Certificate of Education. Alternative Chemistry Syllabuses—Ordinary and Higher Grades. 2s. 6d. (2s. 10d.).

Examination Papers. Scottish Certificate of Education, 1962. 30s. 0d. (32s. 3d.).

Mathematics in Secondary Schools. (Reprinted 1958, revised price.) 1s. 9d. (2s. 0d.).

Modern Languages in Secondary Schools. (Reprinted 1959, revised price.) 2s. 0d. (2s. 3d.).

Technical Subjects in Secondary Schools. (Reprinted 1959, revised price.) 3s. 0d. (3s. 4d.).

Technical Subjects in Secondary Schools. Rooms, Equipment and Safety Precautions. 1s. 3d. (1s. 6d.).

Science in Secondary Schools. (First Three Years.) 1s. 0d. (1s. 3d.).

Classics in Secondary Schools. 1s. 3d. (1s. 6d.).

Geography in Secondary Schools. (Reprinted 1958, revised price.) 2s. 6d. (2s. 9d.).

History in Secondary Schools. (Reprinted 1959, revised price.) 1s. 9d. (2s. 0d.).

Commercial Subjects in Secondary Schools. 1s. 0d. (1s. 3d.).

Homecraft in Secondary Schools. 1s. 0d. (1s. 3d.).

Art in Secondary Schools. 9d. (1s. 0d.).

Music in Secondary Schools. 1s. 0d. (1s. 3d.).

English in Secondary Schools. 3s. 0d. (3s. 4d.).

Nautical Subjects in Secondary Schools. 3s. 6d. (3s. 10d.).

Teaching in Secondary Schools. (Extracts from the Reports of the Secretary of State for Scotland Education in Scotland, 1955-60):

Art. 9d. (1s. 0d.) (1955).
English. 9d. (1s. 0d.) (1955).
Science. 1s. 0d. (1s. 3d.) (1956).
Rural Subjects. 6d. (9d.) (1956).
Nautical Subjects. 6d. (9d.) (1956).
Technical Subjects. 9d. (1s. 0d.) (1956).
History. 9d. (1s. 0d.) (1957).
Geography. 9d. (1s. 0d.) (1957).
Homecraft. 9d. (1s. 0d.) (1958).
Physical Education. 9d. (1s. 0d.) (1958).

Mathematics. 9d. (1s. 0d.) (1958).
Health Education. 9d. (1s. 0d.) (1958).
Classics. 9d. (1s. 0d.) (1959).
Music. 9d. (1s. 0d.) (1959).
Pre-Employment Courses in Scotland. 1s. 3d. (1s. 6d.) (1959).

Commercial Subjects. 1s. 0d. (1s. 3d.) (1960).
Modern Languages. 1s. 3d. (1s. 6d.) (1960).
Gaelic. 1s. 0d. (1s. 3d.) (1960).
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SCOTTISH CERTIFICATE OF EDUCATION EXAMINATION

The Scottish Certificate of Education Examination is held annually by the Scottish Education Department. In 1963 it commenced on Monday, 29th April.

For information as to the purpose and scope of the Examination, and as to the conditions on which candidates may be presented, reference should be made to the Department’s Circular 30 (1962), dated 14th November 1962 (Price 3d.; post free 6d.), and to the booklet, Examination Arrangements, 1963 (Price 5s. 6d.; 5s. 11d.).

Note: Further copies of the Ordnance Survey map extracts used in the Higher Geography First Paper, the Geography Ordinary and the Modern Studies Ordinary papers, may be purchased direct from the Ordnance Survey Office, Leatherhead Road, Chessington, Surrey.
CORRIGENDA

2 English, Ordinary II (Interpretation and Language), question 1, page 2, 6th line of passage. Correct punctuation mark after the word “crowded” is a comma.

11 Geography, Higher II, question 7, page 3: for “St. Laurence” read “St. Lawrence”.

28 Hebrew, Ordinary, question 1, page 2: last letter of fourth word in third last line of passage (a)
read "יָד" instead of "יָד"

29 Hebrew, Higher I, question 1, page 2: third word in first line of passage (a)
read "ךָתִיב" instead of "ךָתִיב"

Question 1, page 2: first letter of fourth word in third last line
read "ב" instead of "ב"

Question 3 (b), page 5: after “the Hophal of”
read "נהו" instead of "נה"

35 French, Higher II (a), Aural Comprehension, passage: to be read to candidates.
Page 2, third last line of passage, after “Julien” read “Est-ce que . . .” instead of “Est-que . . .”.

57 Italian, Ordinary I (b), question 1, page 2, line 7 of passage: read “Accompagnate” instead of “Accompagnati”.

74 Spanish, Ordinary II, question I (5), page 2, third last word of question: read “¿Cómo lo sabe usted?” instead of “¿Cómolo sabe usted?”.

103(a) Chemistry, Higher II, question 5, page 2, fourth word in second last line of question: read “electronic” instead of “atomic”.

ACKNOWLEDGMENTS


2 English, Ordinary II, question 2: the passage set for interpretation is an extract from *Reading English* by E. R. Seary and G. Story, and published by Edward Arnold (Publishers), Ltd., London, W.1, by whose permission it is reproduced.

4 English, Higher I (b), question 1: the passage set for interpretation is an extract from *The Meaning of Art* by Herbert Read, and published by Faber & Faber, Ltd., London, W.C.1, by whose permission it is reproduced.

132 Typewriting, Ordinary, Paper II, question 2: the Accuracy Test is an extract from *Old Yeller* by Fred Gipson, and published by Hodder & Stoughton, Ltd., London, E.C.4, by whose permission it is reproduced.
ENGLISH

Ordinary Grade—(First Paper—Composition and Reading)

Tuesday, 30th April—11 a.m. to 12.45 p.m.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question is shown in brackets after the question.

SECTION A—COMPOSITION

Choose one of the following subjects. On any subject chosen from (a) to (e), write a composition of two to three pages in length, with an appropriate title at the beginning. If you choose subject (f), devote about one page to each part of the exercise.

(a) Describe what you would see around you at a busy street crossing or in a hospital waiting-room or in a popular café or at an auction or at a fair or in a harvest field.

(b) "Our Neighbours."

(c) What arguments would you put forward in reply to people who criticise "pop" records or modern dances or teenage fashions?

(d) "All My Own Work." What experience have you had of making things?

(e) If you could live in any age or in any country, when or where would you choose, and why?

(f) Suppose you are secretary of a newly formed club or society or youth organisation.

(i) Write a letter to the owner of a local hall, asking for the use of his premises and outlining the aims and activities of your group;

and

(ii) Write an account of the first meeting of the group for your local newspaper.

[1]
SECTION B—READING

Answer any TWO questions in this section.

Begin the answer (or fair copy of an answer) to each question on a fresh page.

1. (a) Write an account of one of the following from a play by Shakespeare:—
   a rehearsal; a murder; a fight; a conspiracy; a court scene; a banquet; a robbery.
   (10)

   or

   (b) Select from a play by a dramatist other than Shakespeare a character whom you particularly like or admire, and tell what happens to him or her during the course of the play.
   (10)

2. Tell briefly in your own words the story of a narrative poem you have read and enjoyed. How has the poet made it amusing, exciting, or sad?  
   (10)

3. Choose any short poem which deals with one of the following topics:—
   a person; Nature; weather; animals; war; ships; aeroplanes; the modern scene.
   Tell what the poet says about his subject, and indicate anything that has struck you about his choice of words.
   (10)

4. Who is your favourite writer of fiction? Name a novel or short story which he or she has written, and describe a character or an incident from it.
   (10)

5. Give the title and author of any book, other than fiction, which you consider to be worth reading more than once. Briefly outline the contents of the book, and state the reasons why you think it worthy of a second reading.
   (10)
All candidates should answer BOTH questions.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in brackets after the question.
1. Read through the passage printed below and then answer the questions which follow it, using as far as possible your own words:—

**The City of Youth**

To my primly disciplined Scottish mind there was much about Australia, at first sight and hearing, that seemed reprehensible; but one morning in Sydney my criticism was all blown away by a great gale of pleasure.

It was, I think, a Saturday morning. I was, at any rate, in a hurry to do some shopping and small business before office and magazine were closed. But Hunter Street was crowded. Pitt Street was stormy with opposing tides of traffic, George Street was a maelstrom of humanity. It would be impossible, I saw, to get my business done and buy the shirts I needed; and my temper, which is short, began to express itself in words as brief. But then, en-isled in turbulence, I had time to look about me, and the crowds that thwarted me, I perceived, were strangely young and uncommonly attractive: girls beyond counting, sunburnt and laughing, in bright frocks that all looked made for holiday; young men, bare-headed and bold of movement, with clear skins and confident loud voices; older men and women, stout and prosperous, genial with good living. But the majority was young, and the smell of salt water mingled with the scent of the girls in their summer frocks, as though their brown arms and legs, dyed by the sun, were perfumed also by Pacific waves; and their finery had not a costly, artificial look, but a natural gaiety like apple-blossom in its season, and like orchard-bloom in a gale of wind it blew about the streets, a storm of petals in Hunter street, a honeyed chaos in Pitt Street, and in George Street a whirlwind from the Hesperides, where sea-spray tempers the sweetness of the air.

I forgot my business; I could do without shirts, I decided; and in a state of wholly unexpected pleasure I let the tides take me this way and that, and wondered why girls in Sydney should be more lightly built, more slightly fashioned, than girls in Auckland and Dunedin. Few of them were distinguished by a memorable perfection of beauty, but surprisingly many had the charm of prettiness, freshness, and physical assurance. The young men were unlike the long, lean, heroically statured Anzacs of the first great war but they were sturdy, light-footed, and though city-bred had a mountain-glow or foreshore colour of health. And their elders were everywhere, it seemed, in the minority. It was a youthful traffic, the youngest crowd that ever I was caught in. I escaped at last, but carried with me the sensation of having walked through a seaside orchard in a hurricane.

_Eric Linklater._

---

1 magazine = shop.
QUESTIONS

(a) Why was the writer in the streets of Sydney that morning?  
(b) Why does he think it was a Saturday morning?  
(c) What conditions did he encounter in the streets?  
(d) How did he react at first?  
(e) What caused him to look more closely at the crowds?  
(f) From the information given in the passage, describe in your own words the dresses worn by the girls.  
(g) Describe in your own words the physical appearance of the young men.  
(h) What did the writer notice about the older men and women?  
(i) What do you learn from the first sentence of the last paragraph about the writer’s movements?  
(j) Quote from the passage the sentence which indicates what most impressed him about the crowd.  
(k) In line 3 the writer uses the word *gale*. Write down two other words used in the passage which echo this idea.

TOTAL MARKS = 25
2. Read through the passage printed below and then answer the questions which follow it, using as far as possible your own words:—

Librarians are like missionaries: men and women with a vocation. They follow an arduous course of study for their profession, they are encyclopædic in their knowledge, their knowledge is at the call of anyone who asks for it, their responsibilities are heavy, and they are ill-rewarded for their labours. They fight a constant battle—against insufficient funds, for there never was a librarian yet who was able to buy all the books he wanted for his library; against the loss and mutilation of their books, for the Goth and Vandal are still with us; against busybodies who try to teach them how to run their libraries, for librarians, like teachers of English, are fair game for anyone who has learned to read; but they have an abiding recompense: they control the brain—some might say the soul—of the community they serve, whether it be a university or other learned society, a great city or a small town or village.

No two libraries are alike, for every one is the reflex of its librarian. Some librarians like their libraries bright and gay and put flowers on tables, pictures on walls, and advertise new books by displaying their dust-jackets; others will have none of this frippery. Some put their papers and magazines on tables to be read in a civilised manner; others, presumably influenced by memories of chained bibles, lock them in cases with clasps, bind them serially together so that they become a burden and a weariness and have to be read standing. Most librarians nowadays allow you to browse around their shelves and see and handle the books you want to borrow, knowing well that they are in danger of losing about five per cent of their stock every year; but others, less trusting, keep you at arm’s length from their books and compel you to make your choice from the catalogue—a dull, unsatisfactory, frustrating business, for a book may be entirely enjoyable in one edition and quite unreadable in another, so much depends on the paper, the print, the margins and the binding.

E. R. Seary and G. Story.

QUESTIONS

(a) Explain carefully either in single words or in equivalent phrases the meanings of the following words, as they are used in the passage:—

vocation (line 1); constant (line 4); serially (line 17); browse (line 19). (4)

(b) Express in your own words the meaning of each of the following phrases, as they are used in the passage:

encyclopaedic in their knowledge (line 2); abiding recompense (line 9). (4)

(c) Others will have none of this frippery. (lines 14–15). What does the word frippery convey to you about the attitude of others? (2)

(d) What kinds of subordinate clauses are the following:—

(i) who has learned to read (line 9);
(ii) for every one is the reflex of its librarian (line 12)? (1)

(e) What is the function of:

(i) the dashes in line 10;
(ii) the commas in the clause beginning so much depends .. (line 24)? (2)

(f) Write down two metaphorical expressions which occur in the passage. (2)

(g) Write a summary of the passage in about eighty-five of your own words. (10)

TOTAL MARKS = 25
Write a composition of about three pages in length, with an appropriate title at the beginning, on any one of the following subjects:

(a) The thoughts and impressions aroused in you by one of the following:—
    turning out the attic; rummaging through an old drawer; flicking through a photograph album; browsing in a scrapbook or a diary or an old school magazine; listening to old gramophone records; seeing old films; visiting your old school or home; visiting a folk museum or a children’s museum.

(b) A speech for or against the motion: “That those were the days.”

(c) “And what are the realities of modern life? Well, the chief one is an everlasting, frantic struggle to sell things.” Discuss.

(d) Is there, today, a crusade, or a cause, or a calling, which appeals to you?

(e) “Schools should lay emphasis on the natural sports, in which we are competing against the forces of nature rather than with our fellow men.” What “natural” sports would you recommend for your school, and why would you recommend them?

(f) An account of your family life, to be deposited in a vault for social historians of some future time to find.

(g) Twentieth-century achievement in science or medicine or discovery.

(h) Some problems of old age.

(i) A narrative composition based on one of the following:—
    “Oh, there were some leaned on a stick
    And some on stretchers lay,
    But few walked on their own two feet
    In the early green of day.”

    or

    “We three make up a solitude
    For none alive today
    Can know the stories that we know
    Or say the things we say.”
Answer all three questions.

Begin the answer (or fair copy of an answer) to each question on a fresh page.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in brackets after the question.
1. Peasant art, as so defined, has various characteristics. In the first place, it is never what an odious distinction calls a “fine” art; it is always “applied.” It springs from a desire to impart colour and gaiety to objects of daily use—dress, furniture, pottery, carpets, and so forth. It is not regarded by those who practise it as an activity justified for its own sake. In the second place, it shows a surprising tendency towards abstraction—either towards geometric abstraction, as in the rugs of Finland, or towards a rhythmical stylization of naturalistic motives, as in the pottery of Central Europe and the carved handwork of Polynesia. In many cases, for example in the Greek Islands, both tendencies go hand in hand. The explanation of the tendency towards abstraction is to some extent to be found in the nature of the technique and materials for decoration. Certain methods of weaving, for instance, lead naturally to geometric patterns as “the easiest way out”; the rotation of a potter’s wheel, and the use of liquid “slip” in pottery decoration, similarly tend towards curvilinear patterns. But direct representational art of the type dear to the academic artist is almost unknown in peasant art; the peasant never seems to have found it serve his purpose of making his world a pleasanter place to live in. He prefers to add something to his life, rather than act as a mirror to its drab actuality.

A third characteristic of peasant art is its conservatism. Of all art it is the most difficult to date with any accuracy. Simple motives are evolved and persist for centuries. There is no restless desire in the peasant mind for novelty; he only asks that an object should be gay, and he seems to realize instinctively that an infinite variety of effects can be obtained from the combination of a very few motives and colours.

But perhaps the most amazing characteristic of peasant art is its universality. The same motives, the same modes of abstraction, the same form and the same techniques seem to spring up spontaneously out of the soil in every part of the world. I have seen pottery made in Somerset in the eighteenth century which was almost indistinguishable from pottery made in China in the tenth century. There is no essential difference between the samplers of England and those of Bulgaria and Greece. There are wool-embroidered cloths from the burying-grounds of Egypt that might have been worked by an English cottager in Queen Victoria’s time. These are casual examples, and over and above this basic similarity there exists, of course, an almost endless counter-change of details; the universal elements lend themselves to the creation of many individual styles, determined by climate, customs, and economic conditions.

Herbert Read

Marks

Read the passage printed above, and then answer, as far as possible in your own words, the following questions on it:

(a) Give the meaning of the following words, as they are used in the passage:

odious (line 2); impart (line 3); novelty (line 20); instinctively (line 21);
casual (line 31); determined (line 34).

(b) Explain briefly, but clearly, the meaning of the following phrases, as they are used in the passage:

dear to the academic artist (line 14); drab actuality (line 17); are evolved and persist (line 19); universal elements (line 33).
(c) Write down from the passage one example of each of the following:—
   (i) a simple sentence;
   (ii) a complex sentence or construction;
   (iii) a compound-complex sentence or construction. (3)

(d) Using one adjective for each, describe the characteristics of peasant art. (2)

(e) What does the author mean by an applied art? (3)

(f) Describe, in your own words, how the “tendency towards abstraction” is said to have arisen. (5)

(g) Explain fully, in your own words, the meaning of the sentence beginning:—The same motives . . . (lines 24–25). (4)

(h) Make a summary of the whole passage. (N.B. Your summary should not exceed 120 words. Please indicate the number of words you use at the end of your summary.) (14)

2. Choose four of the following pairs of items. Using your knowledge of grammar, punctuation, and style, comment upon the items in each of the pairs you have chosen:—
   (a) a pocket watch and a watch pocket;
   (b) Man is vile and The man is vile;
   (c) He only borrowed the books for a few days and He borrowed the books for a few days only;
   (d) The courtier passed the cup to the soldier and The soldier was passed the cup by the courtier;
   (e) Have the parents called? and Have the parents called;
   (f) It was incredible that he should survive the crash and That he should survive the crash was incredible;
   (g) A yacht, which was cruising in the vicinity, sped to the rescue and A yacht which was cruising in the vicinity sped to the rescue;
   (h) The amenity of our streets is recommended to your care and Please keep our streets tidy. (10)
3. Read the following advertisement carefully, and then answer from it the questions printed below:—

**THE SHORTEST DISTANCE BETWEEN TWO POINTS IS A CURVE**

The swooping curve of steel wire which now leaps across the Firth of Forth looks good to motorists. When the Forth Road Bridge, of which it is part, opens in 1963, the Edinburgh–Dunfermline run will be cut from 40 tedious miles to 7. For key-jobs like this, bridge builders depend, of course, on STEEL: 6,000 tons of high-tensile steel plate in the two 500 foot main towers; 30,000 miles of high-tensile steel wire in the 2 ft. thick main cables—each made of 11,618 separate wires, only \( \frac{1}{8} \) thick but with a breaking point of over 100 tons a square inch. Another 16,000 tons of high-tensile steel will be added in the roadway of the bridge, plus 880 tons in balustrading and railings. In all, some 39,000 tons of steel will span the Forth, its curves set against the more severe lines of the Forth Rail Bridge, which back in 1889 was the world’s first great bridge to be built of steel. Today, as then, steel—tremendously strong and versatile—is the modern metal.

**STEEL SHAPES TOMORROW**

(a) Write down **two** statements which are facts.  

(b) Write down **two** statements which are expressions of opinion.  

(c) What significance do you attach to the use of:—
   
   (i) **leaps** (line 1);
   
   (ii) **tedious** (line 3)?  

(d) Suggest (i) **an advantage**, and (ii) **a disadvantage**, in the use of figures.  

(e) Illustrate from the advertisement **two** different literary devices used by the copy-writer.
ENGLISH

Higher Grade—(Second Paper—Literature)

Tuesday, 30th April—2.0 p.m. to 3.30 p.m.

All candidates should attempt THREE questions, namely, question No. 1 and ANY TWO of the others.

Begin the answer (or fair copy of an answer) to each question on a fresh page.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question is shown in brackets after the question.

1. (a) Choose one of the following pairs of lovers. Outline briefly what the play tells you of their courtship and eventual marriage. From what the play reveals of their characters, how well do you think they were matched?

Hermia and Lysander; Helena and Demetrius; Portia and Bassanio; Jessica and Lorenzo; Princess Katherine and Henry V; Viola and Orsino; Rosalind and Orlando; Miranda and Ferdinand. (20)

or

(b) "Those that are most vivid in personality are also those that have the most important functions." UNA ELLIS-FERMOR.

Discuss the personality and function of two (or more than two) of the supporting characters in any Shakespearean tragedy or history play, and show how far this statement is true for the play you have chosen. (20)

or

(c) "The power of delighting is derived principally from frequent changes of scene." JOHNSON.

Illustrate and discuss the changing background of any one Shakespearean play. (You may wish to consider such points as: the location, time, and season of the action; the relation between background and action; Shakespeare's description and creation of atmosphere; the effect upon the audience, etc.) (20)

2. (Turn over) [ 5 ]
2. (a) “Faste have I priked ... to riden in this myrie compaignye.”

From Chaucer’s description of the pilgrims in the Prologue to The Canterbury Tales, what indications are there that they were a jolly company? Mention any outstanding exceptions. (15)

or

(b) The fourteenth century has been called “the age of Chaucer”. From your reading of his work, what impression of the people and the conditions of the age have you obtained? (15)

or

(c) Discuss the relative importance of the story and the moral in one, or more than one, tale by Chaucer or fable or narrative poem by Henryson. (15)

3. Choose one of the following prose works. What is the book about? What method has been employed to present the material or theme? What impression has the book made upon you?

Bacon’s Essays; Swift’s Gulliver’s Travels; Galt’s Annals of the Parish; Disraeli’s Sybil; Graves’s Goodbye to All That; Orwell’s The Road to Wigan Pier; Hemingway’s The Old Man and the Sea; Wedgwood’s The King’s Peace; The New English Bible (New Testament). (15)

4. (a) In what circumstances does one of the following occur in any novel you have read? What is its effect upon the story as a whole?

life at school or at university; life on a farm or on a country estate; life in a factory or in a shop or store; life in a country vicarage; life at sea or in the army; life in the colonies or in the tropics; life in prison. (15)

or

(b) Discuss the achievement of any one novelist or writer of plays for the stage or for television whose reputation has been gained in the post-war period. (15)

5. Write a character sketch of either

(i) a male character from a novel or a prose play by a woman writer;

or

(ii) a female character from a novel or a prose play by a male writer.

In your opinion, how convincing is the result? (15)
6. (a) Choose two essays by an essayist born after 1660 whose work you are familiar with, and show what qualities they have in common. Mention some features which are present in one of them which, for you, give it an added attraction.  

or

(b) Mention some of the qualities which appeal to you in a good short story, illustrating them from the work of any writer, or writers, of short stories whose work has impressed you.

7. Choose one of the following poems. Say what it is about, briefly describe its structure, and illustrate with appropriate quotation what is typical of the poet's use of language:—

Il Penseroso; Alexander's Feast; The Cotter's Saturday Night; Resolution and Independence; Ode on a Grecian Urn; Morte d'Arthur; My Last Duchess; The Second Coming; The Ship of Death; Journey of the Magi.

8. Discuss a poem (or more than one poem) by one of the following poets which, in your opinion, would be a suitable introduction to his work as a whole.

Blake; Shelley; Hopkins; A. E. Housman; Wilfred Owen; Dylan Thomas; Robert Frost; Hugh MacDiarmid.

9. Referring to at least two works by a Scottish poet, dramatist, or prose writer, discuss his presentation of the life and manners of a particular region of Scotland at a particular time.

10. Briefly review the work of any well-known writer for children whose books you used to read regularly. Give reasons why you would—or would not—recommend the writer to young readers.
Wednesday, 15th May—9.30 a.m. to 12 noon

All candidates must attempt FIVE questions; of these, at least ONE and not more than THREE, must be chosen from Section VI and the remainder from ONE other Section only.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.

SECTION 1 (1057–1488)

1. Give an account of three of the following, showing their importance in the reign of William the Conqueror:
   - the Battle of Hastings;
   - the Oath of Salisbury;
   - the Royal Forests;
   - Domesday Book;
   - Archbishop Lanfranc.

2. Why did David I support the Church in Scotland and what developments did he encourage in it?

   Describe daily life in a twelfth-century monastery. (References to any monastery you know will be welcome.)

3. State briefly why there were disorders in Stephen’s reign.

   What reforms were carried out in military affairs and in justice by Henry II to prevent further disorders?
4. Which do you think was the most successful of the Crusades and why?
What were the main results of the Crusades for Europe? (10)

5. Give an account of King John's dealings with the King of France and with the Church. (20)

6. What problems faced Bruce after the murder of Comyn (1306)?
Give an account of his career from then up to the Treaty of Northampton (1326). (15)

7. Give an account of Edward III's dealings with Scotland.
Why did he go to war with France? (10)

8. "The Black Death was the most important event of the later Middle Ages." Do you agree? (20)

9. Give an account of conditions in Scotland when James I returned from England (1424). What did James do to restore order? (20)

10. Write notes on two of the following:
Malcolm Canmore; Norman church architecture; the cultivation of the demesne on a manor; St. Francis of Assisi; Roger Bacon; the trivium and quadrivium; the Battle of Largs; Edward I and parliament; fairs and markets. (20)

SECTION II (1488—PRESENT DAY (SCOTTISH))

11. In what ways do the reigns of James IV and James V mark the end of the Middle Ages in Scotland? (20)

12. Give a brief account of each of the following items and explain its importance:
(a) Cardinal Beaton; (6)
(b) The Lords of the Congregation; (6)
(c) The Reformation Parliament (1560). (8)

13. Write notes on two of the following:
(a) the marriages of Mary Queen of Scots;
(b) James VI and the Scottish Kirk;
(c) industry and trade in the reign of James VI;
(d) the Union of the Crowns. (20)
14. Describe the part played by Scotland in the Civil Wars between Charles I and the English parliament, taking account of: the Solemn League and Covenant, the Marquis of Montrose, and the Engagement. (20)

15. Outline the terms of the Restoration Settlement in Scotland in church and state.
   To whom and for what reasons did it give cause for discontent? (5)

16. Explain how the Union of 1707 came about. What in your opinion was the most important factor making for union? (20)

17. State briefly where the Jacobite movement got most of its support and for what reasons.
   Describe the measures taken to pacify the Highlands after the Forty-five. (10)

18. Describe the changes which took place in the life and work of people in the lowlands in town or country in the eighteenth century. (20)

19. Outline the main developments in internal transport in Scotland since 1750. (20)

20. Describe the work of Scottish missionaries and soldiers in India in the nineteenth century.
   What contribution was made to the westernisation of India by the Earl of Dalhousie? (5)
   Has there been a distinctively Scottish contribution to Indian affairs? Give reasons for your answer. (3)

21. Write notes on two of the following:
The Porteous Riots; Thomas Muir; the Municipal Reform Act, 1833; The growth of shipbuilding or coalmining in Scotland; Church union in Scotland and the movement for Christian Unity. (20)

22. Either (a)
   (i) Say what you understand by the terms “Home Rule” and “Devolution”. (6)
   (ii) What attempts have been made since the appointment of a Scottish Secretary in 1885 to provide Scotland with some control of its own affairs? What measures of this kind operate today? (14)

   Or (b)
   Give an account of two of the following with special reference to Scottish history:
The growth of the Labour movement; the Great Depression of the nineteen-thirties; declining industries and new industries since 1945; the Toothill report. (20)
SECTION III (1485–1660)

23. Describe the achievement of three of the following, explaining their historical importance:—
   Vasco da Gama; Cortes; Leonardo da Vinci; Michael Angelo; John Calvin; Ignatius Loyola; Copernicus; Galileo.

   (20)

24. In what ways did either James IV or Henry VII benefit his country?

   (20)

25. Either (a)
   Describe, under the following headings, the changes made by Henry VIII in religious affairs:—
   (i) the power of the Pope;
   (ii) the monasteries;
   (iii) changes in worship and doctrine.

   Or (b)
   Sketch the career of John Knox showing the changes in Scottish religion that he helped to bring about.

   (20)

26. Describe the contributions made to Elizabethan maritime achievements by two of the following:—
   Hawkins; Drake; Raleigh.

   (20)

27. What were the main terms of (a) the Statute of Artificers (1563), and (b) the Elizabethan Poor Law (1601)?

   Discuss the economic problems that one of these was intended to solve.

   (10)


   What light do these throw on his character?

   (15)

29. What problems faced Charles I during the eleven years of personal rule (1629–40) and how did he meet them?

   Explain the breakdown of his personal rule.

   (14)

30. Outline briefly the course of the First Civil War (1641–46).

   How do you account for the Royalist defeat?

   (12)

31. Describe and discuss Cromwell's dealings with two of the following countries:

   (a) Ireland;
   (b) Scotland;
   (c) Spain.

   (20)
32. Write notes on two of the following, showing their importance:—
   Catherine of Aragon; The Protector Northumberland; Edmund Campion;
   Andrew Melville; Francis Bacon; The Pilgrim Fathers; The Barebones
   Parliament.

   (20)

SECTION IV (1660–1783)

33. EITHER (a)
   What were the main provisions of the Clarendon Code and the Test Act
   and what was their importance?

   Or (b)
   Describe Charles II’s religious policy in Scotland and explain the opposition
   which it encountered.

   (20)

34. In what circumstances did two of the following take place and what was
    their importance?
    (a) The Bill of Rights;
    (b) the Act of Settlement;
    (c) the abolition of the Lords of the Articles;
    (d) the Treaty of Limerick.

   (20)

35. Either (a)
    Discuss the contribution of Marlborough to the defeat of Louis XIV in the
    War of the Spanish Succession.

    Or (b)
    What were the main terms of the Treaty of Utrecht?
    Was that treaty fair to Britain’s allies?

   (20)

   (15)

   (5)

36. Give an account of two of the following:—
    (a) The Royal Society;
    (b) Highland life on the eve of the Forty-five;
    (c) the life of an eighteenth-century Lowland laird;
    (d) the life of an eighteenth-century English squire;
    (e) Edinburgh society in the late eighteenth century.

   (20)
37. Explain how Walpole contrived to keep the support of (a) the monarch, and (b) parliament, in the period 1721–1742. How do you account for his fall in 1742? (14) (6)

38. Describe the military achievement of (a) Clive in India and (b) Wolfe in Canada. (12), (8)

39. Explain briefly what is meant by the following:—
(a) the old colonial system, and (b) "no taxation without representation". Give an account of the events in George III's reign leading up to the revolt of the American colonies. (8)

40. What is meant by the Enclosure Movement in England, and what was its importance in the Agrarian Revolution? Explain briefly the different situation in Scotland as regards enclosure. (16) (4)

41. What were the main changes in inland transport in the Industrial Revolution period before the coming of railways? (20)

42. Write notes on two of the following:—
the Popish Plot; the "Young Pretender"; the Duke of Newcastle; the Carron Ironworks; Adam Smith's "Wealth of Nations"; "Wilkes and Liberty". (20)

SECTION V (1783–1914)

43. Give an account of two of the following aspects of the work of the younger Pitt:—
(a) his commercial and financial policy in time of peace;
(b) either the India Act (1784) or the Canada Act (1791);
(c) his policy of repression after the outbreak of the French war;
(d) his conduct of the wars against France. (20)

44. Give an account of two of the following:—
(a) the slave trade and its abolition;
(b) child labour and its regulation up to the Factory Act of 1833;
(c) the contribution of Francis Place or Robert Owen to the Trade Union movement;
(d) the main terms and consequences of the Poor Law Amendment Act (1834). (20)
45. **Either (a)**  
Describe briefly the struggle to pass the Reform Bill in the years 1831-32. (6)  
What were the main changes in the Electoral system of either Scotland or England brought about by the Reform Act of 1832? (14)

**Or (b)**  
What were the demands of the Chartists and which of them had been met by 1914? (14)  
Why did so many people oppose their proposals at the time? (6)

46. Explain the part played by engineers and railway companies in making Britain’s railways in the nineteenth century. (15)  
What advantages did the railways have over other forms of transport in the mid-nineteenth century? (5)

47. Describe the part played by Disraeli in two of the following:—  
(a) the second Reform Act;  
(b) the purchase of the Suez Canal shares;  
(c) the Congress of Berlin;  
(d) his relations with Queen Victoria. (14)  
What light do the topics of your choice throw on the character and views of Disraeli? (6)

48. What were the main reforms of Gladstone’s first ministry, 1868-74? (15)  
Which do you think was the most important and why? (5)

49. Explain the importance to Ireland and to Britain of three of the following:—  
(a) the Act of Union (1801);  
(b) Daniel O’Connell;  
(c) the potato famine;  
(d) the Land League;  
(e) the first Home Rule Bill. (20)

50. Explain, and show the importance of, three of the following:—  
(a) the Bank Charter Act, 1844;  
(b) the growth of limited liability companies;  
(c) the growth of co-operative societies;  
(d) the decline in agriculture, 1870-1900;  
(e) the Dock Strike (1889). (20)
51. **Either (a)**

Describe the extension of British power in India from Wellesley to Dalhousie.

(A sketch map would help.)

(20)

**Or (b)**

What were the causes of the Indian Mutiny?

How do you account for the failure of the Mutiny?

(15) (5)

52. Write short notes on two of the following:

- the Athenian Age in Edinburgh; the Naval Mutinies of 1797; the Berlin Decree (1806); Peterloo; Mehmet Ali; David Livingstone; Florence Nightingale; “the Crofters War”; Lord Lister.

(20)

53. **SECTION VI (1890—PRESENT DAY)**

Marconi; Watson-Watt; Rutherford; Edison; Baird; Fleming; the Wright Brothers.

Give a brief account of three of these and show the importance of the achievements with which they are associated.

(20)

54. (a) Outline the course of events that led to the passing of the Parliament Act of 1911.

(b) What changes did it effect in parliament?

(c) State briefly any important change that has been made since in the Act.

(10) (8) (2)

55. Describe the achievements of the Labour Government of 1945-51 in:

- (a) National Insurance; (b) National Health Insurance, and (c) The nationalisation of industries.

(20)

56. Give an account of two of the following:

- Joseph Chamberlain and Tariff Reform; King Edward VII; the Sinn Fein movement 1916–21; the Representation of the People Act (1918); Ramsay MacDonald; the General Strike of 1926; the Scottish Home Rule Movement in the twentieth century.

(20)

57. **Either (a)**

Sketch the career of Gandhi, showing his importance in Indian history.

(20)

**Or (b)**

Trace the course of events in the twentieth century leading to the independence of India in 1947, showing why partition came about.

(20)
58. Either (a)
Describe and account for two of the following aspects of the peace settlement of 1919:
(i) the treatment of Germany;
(ii) the treatment of Austria;
(iii) the setting up of the League of Nations. (20)

Or (b)
"When President Wilson returned to America in 1919, with the Treaties he had signed and the Covenant of the League he had created, the Senate repudiated both."

Answer the following questions:
(i) Who was "President Wilson"? (2)
(ii) What is meant by "the League"? In what circumstances, and with what aims, had it been established? (8)
(iii) What is "the Senate" and how is it chosen? (6)
(iv) Why would a British parliament be unlikely to treat a British Prime Minister as Wilson was treated by the Senate? (4)

59. Give an account of Hitler's foreign policy from 1933 to 1939. (20)

60. Write notes on two of the following:
the Gallipoli Campaign; Fascist rule in Italy; Thomas Masaryk; the Spanish Civil War; fighting in North Africa in the Second World War; Hiroshima. (20)

61. Either (a)
Give an account of three of the following and show their importance in Russian history:
(i) Kerensky;
(ii) the New Economic Policy;
(iii) Trotsky;
(iv) the collectivisation of agriculture;
(v) Hitler's Russian Campaign. (20)

Or (b)
Sketch the career of Franklin D. Roosevelt up to Pearl Harbour.
(You may find the following headings useful: personal background; the Great Depression; the New Deal; the end of Isolationism.) (20)

62. For this question see the special map sheet provided. (20)
HISTORY

Higher Grade

(First Paper—British History)

Wednesday, 15th May—9.30 a.m. to 11.45 a.m.

Candidates should attempt FOUR questions chosen either from any one section or from any two sections. Questions marked with an asterisk appear in more than one section but may not be answered more than once.

In any question candidates will be given credit for appropriate sketch maps and diagrams.

Twenty-five marks are assigned to each question.

SECTION 1 (1066–1485)

1. Discuss the view that feudalism was introduced into England by William I.

2. Why was there civil war during the reign of Stephen?

3. "King John was the ablest of the Angevins" (J. R. Green). Do the events of this reign bear out this judgment?

4. Why and with what consequences was Henry III so often in conflict with his barons?

5. What justification is there for regarding the reign of Alexander III as the "Golden Age" of medieval Scotland?

6. For what reasons, and with what reservations, is it possible to regard Edward I as "the father of the English parliament"?

7. Discuss the development of the English wool trade in the thirteenth and fourteenth centuries.

8. Discuss the causes and consequences of the Peasant's Revolt.
9. "In the Middle Ages royal minorities were always disastrous for the monarchy." Consider this judgment in relation to the minorities of two of the following:— Richard II of England; Henry VI of England; James I of Scotland.

10. What part did the royal burghs play in the history of medieval Scotland?

11. What were the main defects of the church in either England or Scotland in the fifteenth century?

12. Discuss the view that Richard III’s reputation has been unfairly blackened.

SECTION II (1488–1832 (Scottish))

13. What contributions were made to the political, social and cultural life of Scotland in the reign of James IV, and how far were they enduring?

14. How did events in other countries help to shape Scottish history in the reigns of James V and Mary, Queen of Scots?

15.* Describe the part played by John Knox in the Scottish Reformation. How far did he achieve his objects?

16. How far was James VI successful in uniting and dominating the Scottish people?

17. EITHER

(a) Give an account of the Scottish economy in the seventeenth century showing how the government sought to foster manufactures and trade.

OR

(b) "The usual emphasis on ecclesiastical history has resulted in a distorted picture of seventeenth century Scotland." How far do you agree?

18.* To what extent did the grounds for opposition to Charles I in Scotland differ from those in England?

19. "Much that happened between 1638 and 1660 left its mark in Scotland after the Restoration." How far is this true?

20.* What were the chief demands of the Scots in negotiating for union with England and how far were they met?

21. Describe and account for changes in the life and work of country people in the Highlands and Lowlands in the eighteenth century.

22. Give an account of the textile industries of Scotland in the eighteenth and early nineteenth centuries. Assess their importance in the Scottish economy.

23. Make notes and comment on the historical significance of two of the following:— James Watt; Henry Dundas, Viscount Melville; Adam Smith; cultural life in late eighteenth century Edinburgh.

24. In what ways did the French Revolution influence Scottish life and politics?
SECTION III (1485–1688)

25. For what reasons was Henry VII able to win and retain the crown of England?


27. What forms had the Reformation taken by the end of Henry VIII's reign, and what religious changes were made under his successor?

28. EITHER
   \[ (a) \] Give an account of the agricultural changes that took place in England in the sixteenth century.
   OR
   \[ (b) \] What were the main social and economic problems that faced Elizabeth on her accession and how successful was she in dealing with them?

29.* Describe the part played by John Knox in the Scottish Reformation. How far did he achieve his objects?

30. Discuss how far the Elizabethan struggle against Spain was successful.

31. "The wisest fool in Christendom." To what extent is this a fair description of James I as King of England?

32.* To what extent did the grounds for opposition to Charles I in Scotland differ from those in England?

33. "Both a crime and a blunder." Do you agree with this opinion on the execution of Charles I?

34. How do you account for Cromwell's failure to govern in co-operation with Parliament?

35. Explain and illustrate the governmental attitude to trade and colonies in the later seventeenth century.

36. Illustrate and account for the English attitude to Roman Catholicism in the reigns of Charles II and James II.

SECTION IV (1688–1832)


38.* What were the chief demands of the Scots in negotiating for union with England, and how far were they met?

39. Give an account of English social life either (a) in London, or (b) in the country, in the reign of Queen Anne, referring to any contemporary or later writings which you may have read.

Page three
40. How far is it true to say that in the Treaty of Utrecht Britain's interests were safeguarded at the expense of her allies?

41. For what reasons and by what methods was Sir Robert Walpole able to dominate the political scene for so long in the reigns of the first two Georges?

42. Do you consider that the American colonists were justified in rebelling against Britain?

43. What were the main changes in the British iron industry in the eighteenth century, and what influence did that industry have on the economic life of the country?

44. "Britain's difficulty is Ireland's opportunity." Show the effect of (a) the American War of Independence, and (b) the French Revolutionary War on Irish affairs.

45. Discuss the importance of Britain's contributions in the Napoleonic War of 1803–15.

46. Account for the distress among the rural population of Britain in the first twenty-five years of the nineteenth century.

47. To what extent did Castlereagh and Canning pursue different foreign policies?

48. What were the main defects in either (a) the Scottish or (b) the English electoral systems on the eve of the 1832 Reform Act?

SECTION V (1832–1939)

49. Estimate the importance of the Whig Reforms of 1833–41.

50. What were the causes of the Chartist Movement and why did it fail?

51. Discuss the opinion that in his foreign policy Lord Palmerston was more enlightened during the period 1830–41 than after 1846.

52. What contributions to Free Trade were made by Peel and Gladstone respectively?

53. Describe, and comment upon the importance in the religious and social life of the period of two of the following:

   The Evangelical Movement;
   The Oxford Movement;
   The Christian Socialists;
   The Salvation Army;
   The Disruption of the Church of Scotland.

54. Give an account of the building of railways in Britain and indicate the main economic and social consequences in the later nineteenth century.

55. Discuss the attitudes of Gladstone and Disraeli to the Eastern Question.

56. Why have the last two decades of the nineteenth century been described as the great age of British Imperialism?
57. Estimate the importance of the work of the Liberal government of 1905–14 in
domestic affairs.

58. EITHER

(a) Discuss the contribution made to Indian history by Lord Dalhousie.

OR

(b) What problems faced British governments in India between 1918 and 1939 and
how did they deal with them?

59. EITHER

(a) Trace and account for the development of the Trade Union Movement from the
Dock Strike of 1889 to the Trade Disputes Act of 1927.

OR

(b) What was there in the economic and social condition of Britain in the decade
1929–39 to justify the description “the gloomy thirties”?

60. Give an account of Britain’s relations with France and Germany between the Treaty
of Locarno (1925) and the outbreak of the second World War.

61. Write notes on two of the following showing their importance:—

   Lord Shaftesbury; the Bank Charter Act (1844); Cardwell’s Army Reforms;
   the Scottish Home Rule Movement; the Battle of Jutland; the Irish Treaty 1922;
   Ramsay Macdonald.
HISTORY

Higher Grade

(Second Paper—European History)

Wednesday, 15th May—1.30 p.m. to 3.45 p.m.

Candidates should attempt FOUR questions.

In any question candidates will be given credit for appropriate sketch maps and diagrams.

Twenty-five marks are assigned to each question.

SECTION I (CLASSICAL AND MEDIAEVAL)

1. Give an account of the circumstances leading to the creation of the Athenian Empire.

2. "A great general but a poor ruler." Is this a sound judgment on Alexander the Great?

3. What were the aims of the Gracchi and why did they fail?

4. "In the fifty years after Julius Caesar's death, the government of Rome and its empire was completely transformed." How far is this true?

5. What part did trade and industry play in the life of the Roman Empire in the first three centuries A.D.?

6. "The Germanic invaders of the fifth and sixth centuries wanted to become Romans, not to destroy the Roman Empire." Is this view justified?

7. How far did the achievements of Charlemagne prove to be lasting?

8. What conditions in the Church in the eleventh century required reform, and what improvements had been made by the death of Gregory VII in 1085?
9. To what extent may Frederick Barbarossa be said to have sacrificed Germany to his imperial ambitions?

10. To what extent was France a united country with a strong monarchy by the end of the thirteenth century?

11. What caused the Great Schism and why did it last so long?

12. Why were Spain and Portugal in the forefront of the great explorations of the fifteenth century?

13. Write notes on two of the following:—
   the Spartan constitution; the invasion of Xerxes; Aristotle; Cicero; the Roman conquest of Gaul; Gregory the Great; Otto the Great; the Universities in the thirteenth century; the Hanseatic League; the Peace of Arras.

SECTION II (MODERN (TO 1939))

14. EITHER

   (a) How serious was the Turkish threat to Europe in the sixteenth century and what steps were taken to meet it?

   OR

   (b) Trace the course of the Lutheran Reformation and estimate its success by the time of the Peace of Augsburg (1555).

15. “The French Wars of Religion were not fought over religious differences alone.” What were the issues?

16. For what reasons and to what extent may it be said that Spain was in decline by the end of the sixteenth century?

17. EITHER

   (a) How do you account for the greatness of either the Dutch Republic or Sweden in the seventeenth century?

   OR

   (b) What were the effects of the Thirty Years War on Germany?

18. “Louis XIV tackled none of the real problems facing his country.” Do you agree?

19. What was Frederick II’s contribution to the development of Prussia?
20. Compare the aims and achievements of Catherine the Great of Russia and the Emperor Joseph II.

21. Napoleon has been described as "the Awakener of Europe." How far is this true of Italy, Germany and Spain?

22. Why were there revolutions in so many countries in 1848-49?

23. What were the main aims of Napoleon III in domestic and foreign policy and why did he have so little success?

24. EITHER

(a) Why and with what consequences did the main European powers engage in a "scramble for Africa" in the period 1870-1900?

OR

(b) What part did railways play in the development of the major European countries in the second half of the nineteenth century?

25. Account for the feeling of insecurity among the European powers in the period 1890-1914, and show how it affected their policies towards each other.

26. Outline the provisions of the Treaty of Versailles (1919) and discuss the view that it was unfair to Germany.

27. What was Stalin's contribution to the development of Russia up to 1939?

28. Write notes on two of the following:—

Michelangelo; the Spanish conquest of Central America; Ignatius Loyola; Ivan the Terrible; Mercantilism; the Encyclopaedists; Danton; Garibaldi and the Thousand; Italy and Abyssinia 1896-1936.
GEOGRAPHY

Ordinary Grade

Thursday, 16th May—9.30 a.m. to 12 noon

Candidates should attempt FIVE questions, viz., the TWO questions of Section A, together with THREE other questions from Sections B and C of which ONE must be from Section B, ONE from Section C, and the third from EITHER Section B OR Section C.

Candidates should read the questions carefully. The answers should be clearly expressed and entirely relevant.

The numbers of the pages in the examination book on which the answer to a question must be written are given after the question.

Where a reference map is provided for a particular question or for the area specified in a subtitle, the number of the reference map is given after the question or subtitle.

Write legibly and neatly, and leave a space of about half an inch between the lines.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.
SECTION A

Both questions in this section should be attempted

1. On the map of the world provided in the examination book—

(a) Name:
   (i) the three islands marked A, B and C;
   (ii) the five ports marked with black dots.
   4

(b) Identify the three ocean currents marked with blue arrows and beside each state whether it is a cold or a warm current.

(c) Print the names of an important mineral mined at each of the locations marked in red thus, +.

(d) (i) Print one of the following words—sparse, moderate, dense—beside each of the areas numbered 1, 2, 3 and 4, to describe its population distribution.
   (ii) For each area name the main type of vegetation.

(e) (i) Print the word “overhead” along the line of latitude where the midday sun is vertically overhead on 21st December.
   (ii) Mark with a cross the place on that line where the sun would be overhead at 4 p.m. G.M.T.

(f) Print the initials given in brackets over an area where each of the following occurs or is practised:
   collective farming (CF), pastoralism (P), plantation agriculture (PA), citrus fruit growing (G).

[Pages 1 and 2] (20)

2. Examine carefully the part of the one-inch Ordnance Survey map of England provided and the sketch-map of the same area given in the examination book, before answering the following questions:

(a) (i) Calculate the area of the map. Give your answer in either square miles or square kilometres.
   (ii) What is the height of the surface of Ennerdale Water above mean sea level?
   (iii) What do the following words mean as used on the map:
   fell, beck, tarn?

(b) (i) Describe the relief of Area A and Area B.
   (ii) How does Area A differ from Area B in distribution of settlements and in pattern of communications?

[Pages 3 and 4] (20)
SECTIONS B AND C

Candidates should attempt THREE questions from Sections B and C. Of these ONE must be from Section B and ONE from Section C. The third question may be from EITHER Section B OR Section C.

Credit will always be given for appropriate sketch-maps and diagrams.

Geographical descriptions of areas must include a sketch-map.

SECTION B

British Isles (Reference Map No. 1)  

3. (a) On the map of the British Isles, mark where appropriate and name:—  
Vale of York, Skye, Turnhouse Airport, Chester, Carlisle, Limerick.  
3

(b) Encircle two areas where open-cast working of iron ore is important; and  
name, marking with a cross, two centres of steel production.  
3

(c) (i) Where in the British Isles is shipbuilding an important industry?  
(ii) Explain briefly why shipbuilding is found in two of the areas you name.  
2

(d) (i) Which important new industries have grown up round London during  
the present century?  
(ii) Give reasons for their development in this area.  
6

4. (a) On the map of Scotland name the four towns numbered 1, 2, 3 and 4;  
name an important industry for each of the towns lettered X and Y; and  
name the tourist areas A and B.  
4

(b) Discuss briefly the site and general situation of one of the following  
Scottish towns:—Edinburgh, Dundee, Stirling, Inverness.  
8

(c) The populations of four Scottish towns in 1951 and 1961 are given below.  
What are the main reasons for the change in the population of each?  
8

<table>
<thead>
<tr>
<th>Town</th>
<th>1951</th>
<th>1961</th>
<th>Percentage increase or decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thurso</td>
<td>3,249</td>
<td>8,038</td>
<td>+147.4%</td>
</tr>
<tr>
<td>Glasgow</td>
<td>1,089,767</td>
<td>1,054,913</td>
<td>- 3.2%</td>
</tr>
<tr>
<td>Rothesay</td>
<td>10,141</td>
<td>7,656</td>
<td>- 24.5%</td>
</tr>
<tr>
<td>Grangemouth</td>
<td>15,432</td>
<td>18,860</td>
<td>+ 22.2%</td>
</tr>
</tbody>
</table>

[Pages 7 and 8]
5. Give a geographical account of one of the following regions:—

East Anglia, Central Plain of Ireland, South Wales, Cornwall and Devon. (20)

[Pages 9 and 10]

6. In what ways are the British Isles favourably situated for foreign trade? (20)

[Pages 11 and 12]

SECTION C

Europe and the U.S.S.R.

7. (a) On the map of Northern Europe name the uplands 1 and 2; the strait 3; the river 4; the group of islands 5; the island 6; and the ports 7 and 8. (4)

(b) Why is the River Rhine of greater economic importance than any other river marked on the map? (10)

(c) How does the export trade of Sweden differ from that of Denmark? (6) (20)

[Pages 13 and 14]

8. Choose any densely populated area in Europe other than the Ruhr and the valley of the Rhine. Explain why it is densely populated. (20)

[Pages 15 and 16]

9. Attempt either A or B.

(A) France has within her borders examples of three types of climate.

(1) Describe these in terms of temperature, rainfall, and winds, giving reasons for their occurrence. (12)

(2) How have these three types of climate influenced agriculture? (8)

[Reference Map No. 2] (20)

(B) Choose one of the following and give an account of the seasonal activities of its inhabitants:—

a Dutch polder, an Alpine farm in Switzerland, a Norwegian village, a Danish co-operative farm. (20)

[Pages 17 and 18]

10. Give an account of either The Don Industrial Area or Farming in European Russia. (20)

[Pages 19 and 20] [Reference Map No. 3]
North America

11. The following diagram shows, for 1959, the value in millions of dollars of some leading Canadian exports, grouped under three main classes:

![Diagram showing Canadian exports]

(a) Name some of the commodities which are included in each of these three groups.

(b) What aspects of Canada's physical geography (relief, climate, and vegetation) do these statistics illustrate?

12. In North America, between 1951 and 1961, the population of California increased by almost 50 per cent. and the population of Florida by almost 80 per cent. In Canada, for a comparable post-war period, the population of British Columbia increased by over 70 per cent., but in Saskatchewan it decreased by almost 2 per cent.

(a) Suggest reasons for the increases in Florida, California, and British Columbia.

(b) Suggest reasons for the decrease in Saskatchewan.

13. Write notes on four of the following:

- Soil erosion in the United States.
- Alaskan Highway.
- Lake Peninsula.
- Fall Line.
- Chinook.
- Magnetic North Pole.
- Indian Reservation.

[Reference Map No. 4]
Asia

14. In the continent of Asia are to be found the highest and the lowest land in the world, some of the highest and some of the lowest temperatures, some of the wettest and some of the driest areas, some of the most fertile and some of the most barren areas, and some of the most densely populated and some of the least densely populated areas.

Illustrate the truth of this statement from your knowledge of Asia. (20)

[Pages 27 and 28] [Reference Map No. 5]

15. Write a geographical description of a river basin either in India and Pakistan or in China. (20)

[Pages 29 and 30] [Reference Map No. 5]

Africa

16. Write a description of the way of life of one of the following:—

an Egyptian peasant; a West African cocoa farmer; a pygmy of the Congo forest; a Saharan tribesman; a Veldt farmer. (20)

[Pages 31 and 32]

Australia and New Zealand

17. On sketch-maps only, one for each town, show the position and trade of four of the following:—

Sydney, Melbourne, Perth, Hobart, Wellington, Auckland. (20)

[Pages 33 and 34]

South America

18. With reference to that part of South America shown on the map on page 35 of the answer book, explain:—

(a) The wet west southwards from about 38° S. and the relatively drier east in the same latitudes. 6

(b) The dry west northwards from about 35° S. and the relatively wetter east in the same latitudes. 6

(c) How do these differences in rainfall affect human settlement and occupations? 8

[Pages 35 and 36] (20)
General

19. The Commonwealth lies in temperate, tropical, and equatorial latitudes on each side of the equator.

What are the advantages of this for Britain as far as foodstuffs are concerned? Refer to specific examples. (20)

[Pages 37 and 38]

20. A river and its valley are normally divided into upper, middle, and lower sections.

(a) Describe briefly the main characteristics of each section. 9

(b) With reference to any one Scottish river and its valley, show how far these three sections differ in the occupations of their inhabitants. 11

[Pages 39 and 40] (20)
Reference Map No. 1

DISTRIBUTION of POPULATION

Density per sq. mile

0-50
51-500
Over 500

MILES
0 20 40 60

Page eight
1963

SCOTTISH CERTIFICATE OF EDUCATION

GEOGRAPHY

Higher Grade—(First Paper)

Thursday, 16th May—9.30 a.m. to 12 noon

Candidates should attempt FIVE questions, viz., the two questions of Section A, one question from Section B, one from Section C and one from EITHER Section B OR Section C.

Candidates should read the questions carefully. The answers should be clearly expressed and entirely relevant.

In any question credit will be given for appropriate sketch-maps and diagrams.

Write legibly and neatly, and leave a space of about half an inch between the lines.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question is shown in the margin.

SECTION A

The two questions of this Section should be attempted

Marks

1. After studying the part of the Ordnance Survey map which is provided:—

(a) Describe the view from Latrigg (276245) looking N.W., i.e., the area bounded by northing 250 and easting 280.

(b) Comment on the following:—

(i) the site of Keswick;

(ii) Striding Edge and Red Tarn (345153); and

(iii) Mouth of R. Derwent at its entry into Derwent Water.

(c) Comment on the method of showing relief used in this map.

(32)
2. The following statistics refer to population changes in Scotland between 1951 and 1961.

(a) Map these on the base-map of Scotland provided, using a graded system of shading which separates the given counties into three significant groups. (Do not use colours)

(b) Comment on the figures for Dunbarton, Berwick, and Lanark.

(The answer to (b) must be written in your answer book.)

<table>
<thead>
<tr>
<th>County</th>
<th>Percentage</th>
<th>County</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berwick</td>
<td>-10.5</td>
<td>Ross and Cromarty</td>
<td>-4.8</td>
</tr>
<tr>
<td>Dunbarton</td>
<td>+12.3</td>
<td>Roxburgh</td>
<td>-5.2</td>
</tr>
<tr>
<td>Fife</td>
<td>+4.5</td>
<td>Selkirk</td>
<td>-3.1</td>
</tr>
<tr>
<td>Inverness</td>
<td>-1.8</td>
<td>Stirling</td>
<td>+3.9</td>
</tr>
<tr>
<td>Lanark</td>
<td>+0.7</td>
<td>Sutherland</td>
<td>-1.7</td>
</tr>
<tr>
<td>Peebles</td>
<td>-7.5</td>
<td>West Lothian</td>
<td>+4.7</td>
</tr>
</tbody>
</table>

(Figures taken from Report on 16th Census) (20)

SECTIONS B AND C

THREE questions should be attempted from these Sections, viz., one from Section B, one from Section C, and one from EITHER Section B OR Section C.

SECTION B

3. (a) What are the problems which must be solved by a cartographer drawing a map of the world to show distribution of forests?

(b) Select two projections, one suitable and one less suitable for such a map, and compare and contrast them.

4. Choose any area of Scotland extending over several (not more than four) contiguous counties and show how ice has helped to shape its landscape.

Page two
5. (a) Draw a sketch-map of the relief of your local area (extent 50-100 square miles).

(b) Describe the climate of this area, quoting statistics to illustrate your account, and give some indication of the actual extremes of temperature and rainfall which may be experienced throughout the year.

6. (a) Show that in lowlands within the tropics rainfall, both in its amount and in its seasonal incidence, is of greater importance than temperature in deciding the pattern of vegetation. Refer to specific examples.

(b) In what ways does relief modify the pattern and alter the character of the vegetation.

SECTION C

7. (a) What factors contribute to the growth of heavy industries in an area?

(b) Select any two of the following areas and point out similarities and differences in the development of their heavy industries:
   - South Wales; Pittsburg area; Damodar valley; Donetz Basin.

8. (a) What is meant by plantation agriculture, shifting agriculture, and pastoralism?

(b) Select one of these and for any one area in which it is practised give an account of the land utilisation in some detail.

9. In the past towns located on the banks of large rivers have tended to grow up at certain critical points. Explain where these points tended to be, giving sketch-maps of particular examples to illustrate each of the locations mentioned.

10. (a) "Underdeveloped" and "overpopulated" are frequently used today to describe parts of the modern world. What do these terms mean?

(b) Select three of the following areas and state, with reasons, whether you consider them to be underdeveloped, overpopulated, or neither or both:
   - Peninsular Italy; Japan; Amazon Basin; Lower Ganges Valley.

11. (a) Explain the difference between any three of the following:
   - Moslem; Hindu; Arab; Bantu; Negro.

(b) Describe the present world distribution of any one of the people enumerated.
Candidates should attempt FIVE questions from FOUR sections which must include Sections A, B and C, the fourth section being EITHER Section D OR Section E, viz., one question from each of the four sections and a fifth from any one of these four sections.

Candidates should read the questions carefully. The answers should be clearly expressed and entirely relevant.

In any question credit will be given for appropriate sketch-maps and diagrams. Geographical descriptions must include a sketch-map.

Write legibly and neatly, and leave a space of about half an inch between the lines.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.
SECTION A

British Isles

1. (a) On a sketch-map of either the Highlands or the Southern Uplands of Scotland suggest a division of the area into sub-regions.

   (6)

(b) Explain the basis of your subdivision and discuss the distribution of population in the selected area.

   (14)

   (20)

2. Write a geographical description of one of the following areas:—
   North Wales; Yorkshire; Ulster.

   (20)

3. (a) Describe the climate of England east of a line from the mouth of the Tees to the Isle of Wight.

   (8)

(b) In what respects and for what reasons does the climate of this area differ from that of the rest of Britain?

   (12)

   (20)

SECTION B

Europe

4. (a) Describe the broad features of the relief and drainage of Europe (excluding Russia).

   (12)

(b) How have these features affected north–south communications?

   (8)

   (20)

5. (a) Draw a sketch-map of any one of the following industrial areas to show

   (i) main towns and (ii) main industries.

   N.E. France; Ruhr; Belgium; N. Spain.

   (8)

(b) Discuss the distribution of industry (excluding agriculture) within the selected area under the headings of power, raw materials, and communications.

   (12)

   (20)

6. From Denmark, Finland, and the Scandinavian countries select any one small area which you have studied in detail and write a geographical description of it. (20)
SECTION C

North America

7. Describe and account for the agriculture of one of the following:—
   California; Prairies of Canada; the Lake Peninsula and St. Laurence Valley. (20)

8. Explain why two of the following towns have grown to their present size and importance. Illustrate your answer with appropriate sketch-maps for which eight marks will be allocated.
   St. Louis; Buffalo; Vancouver; Birmingham (Ala.); Boston; New Orleans. (20)

9. (a) On a sketch-map of North America mark clearly the limits of (i) Western Cordillera, (ii) Canadian Shield, (iii) S.E. Coastal Plain, (iv) Appalachian Mountains, and (v) Interior Lowlands. (8)

   (b) Write a description of the relief and drainage of any one of these areas. (20)

SECTION D

10. (a) Briefly describe the density distribution of population in either China or India. (Do not include Pakistan.) (12)

   (b) In what respects is the selected distribution typical or not typical of Monsoon Asia as a whole? (8)

11. (a) Account for the importance of any three of the following towns:—
    Leningrad; Odessa; Sverdlovsk; Tashkent; Novo Sibirsk; Vladivostock. (15)

   (b) To what extent does the distribution of the towns named above reflect the distribution of population in the U.S.S.R.? (5)

12. (a) Name the main desert areas of Asia. (3)

   (b) Describe the ways in which water becomes available for agriculture within these predominantly dry areas. Refer to specific examples. (17)

13. (TURN OVER)
13. Discuss the seaborne trade (exports and imports) of either Australia or New Zealand with special reference to situation, commodities, and markets. (20)

14. Suggest reasons why the native population of Africa, south of the Sahara, remained relatively backward until recently.
   Summarise some of their recent advances. (15) (5) (20)

15. Account for the density distribution of population in any three of the areas with more than 50 persons per square mile as shown on the accompanying map of South America. (20)
Population

- Over 50 persons per square mile
- 5-50
- Under 5
SCOTTISH CERTIFICATE OF EDUCATION

MODERN STUDIES
Ordinary Grade

Tuesday, 28th May—9.30 a.m. to 12.15 p.m.

Candidates should attempt FIVE questions, two from Section A, one from each of Sections B and C, and one other question from any Section.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read. The value attached to each question, or to each part of a question, is shown in the margin.

SECTION A
Great Britain

1. Study the accompanying Ordnance Survey map, and use it to answer the following questions:

(i) Explain, with particular reference to land forms and land use, why there are more roads in the southern part of the area than in the north. (5)

(ii) Examine the main road from BAPCHILD (931631) to CHALKWELL (889641). What traffic problem is likely to be encountered? (3)

(iii) A large oil refinery is located at 870750.
   (a) What are the advantages of this site for an oil refinery? (5)
   (b) Describe the nature of the land on which it has been built. Do you consider that good farmland has been lost? (7)

2. Select two of the following areas:—
   Aberdeenshire; Ayrshire; the Fens.

Suppose you were to acquire a farm in each of the two areas chosen. Describe with reasons the type of farming you would practise in each. (Take account among other things of the influence of climate and relief.) (10)
3. Attempt either (a) or (b).

(a) The letters A, B, C, D, E and F on the accompanying map of lowland Scotland (Reference Map No. 1) represent the sites of important developments, namely:

Hunterston; Grangemouth; Cumbernauld; Bathgate; Ravenscraig; Queensferry.

(i) Identify four of the sites by entering their names along with the appropriate letter in your answer book. (2)

(ii) Answer the following questions on any two of the sites:

(1) State briefly what the projects are. (4)

(2) Explain their location. (4)

(3) In what ways are they expected to benefit Scotland? (10)

(b) Study the accompanying map of London and adjacent areas (Reference Map No. 2).

(i) On the map the symbol ◆ represents new towns. Copy the four other symbols used on the map into your answer book and say what each represents from the following list:

Oil refining; commercial and financial activity; vehicle manufacture; light industry. (3)

(ii) Explain the location of the new towns shown on the map. (5)

(iii) Why has so much industry been attracted to the London area? (12)

4. Attempt either (a) or (b).

(a) Answer the following on either the cotton industry of Lancashire or the coal-mining industry of Lanarkshire:

(i) Describe the conditions which favoured the development of the industry. Account for its contraction in recent years. (12)

(ii) What measures have been taken to provide additional employment in the area? (8)

(b) Select one of the following modern industries:

Chemical manufactures; man-made fibres; electronics.

Discuss it under these headings:

Location of industry and type of manpower employed.
Methods of production.
Use of products and markets. (20)
5. (i) Describe briefly the different forms of business ownership operating in Britain today.

(ii) What are the advantages and disadvantages of the tendency towards large-scale combination?

6. Give an account of two of the following, and explain their importance in British industrial relations:—
   the Trades Union Congress; Joint Industrial Councils; the "closed shop"; shop steward.

7. "The proportion of the population under 15 and over 65 years of age is growing in relation to that of the working population."
   (i) Why do more people live longer nowadays than in the past?
   (ii) Give an account of the social services provided by the State for either young people or old people.
   (iii) How is the change in balance of the population likely to affect the social services?

8. Attempt either (a) or (b).
   (a) (i) What limitations have been placed upon the power of the House of Lords by the Parliament Acts?
   (ii) Indicate briefly the main functions of the House of Lords today.
   (iii) On what grounds might its abolition be urged?

   (b) (i) What do you understand by the term "unwritten" in regard to the British constitution?
   (ii) What is the Cabinet, how is it formed and what are its duties?
   (iii) State briefly in what ways the power of the Prime Minister differs from that of other members of the Cabinet.

9. (i) Give an account of the different types of local authority in Scotland and show how the responsibilities of each type differ.
   (ii) In what ways do local authorities raise money for the services they provide?

10. Write notes on two of the following:—
   (ii) Town planning since 1945.
   (iii) Question Time in the House of Commons.
   (iv) The professional officials of local councils in Scotland.
   (v) The jury system.
SECTION B
International Affairs and their Background

11. Examine the accompanying map of part of the northern hemisphere (Reference Map No. 3).
   (i) Enter the key letters in your answer book and answer the following:
   (a) Name the countries A, B, C, and the cities D, E, F, G, H. (Each city has more than one million inhabitants.) (4)
   (b) Name the coalfields X, Y and Z, and the oil-producing areas P, Q, and R. (3)
   (ii) What are the main limitations on farming in the stippled area? (4)
   (iii) The area of Europe outlined in red comprises the countries which signed the Treaty of Rome in 1957.
   (a) Name the area. (1)
   (b) Outline the principal aims of the treaty and indicate briefly what steps have been taken so far to carry them out. (8)

12. Reference Map No. 4 shows two different areas in the United States of America. Compare the areas under the following headings:
   Climate
   Occupations
   Density of population
   Standard of living. (20)

13. (i) What was the New Deal? (6)
   (ii) Describe how the New Deal policies affected the lives of the people of the United States of America in the nineteen-thirties. (14)

14. (i) Give an account of the political and economic problems which faced the Weimar Republic (1919–1933). (15)
   (ii) Describe briefly the downfall of the Republic in 1933. (5)

15. Attempt either (a) or (b).
   (a) (i) The "West German miracle". What grounds are there for this description of economic progress in the Federal Republic since 1945? (5)
   (ii) Select any one region of West Germany which has contributed to her progress, and give an account of its raw materials, industries and communications. (15)
   (b) Compare the industries or the agriculture of the Paris Basin and of the Rhône-Saône Basin. Suggest reasons for any differences which you describe. (20)
16. Reference Map No. 5 shows two areas in the U.S.S.R.
   (i) Describe the agriculture of each area and show how it has been influenced in each by climate, vegetation and soil.
   (ii) What factors, other than geographical, have influenced agricultural output in the U.S.S.R.? (16)

17. Explain why Lenin introduced the N.E.P. (New Economic Policy, 1921–8) and describe it briefly.
   Outline the economic policy of Stalin before 1941, showing in what respects it differed from the N.E.P. (8) (12)

18. Give a short account of two of the following, and explain their importance:—
   the League of Nations; the growth of Fascism in Italy between the wars; the Spanish Civil War; Isolationism in the U.S.A. from 1919 to 1941 (Pearl Harbour); Hitler’s Russian Campaign; the Potsdam Conference (1945). (10) (10)

19. (i) Outline the events leading up to the formation of the North Atlantic Treaty Organisation. (8)
   (ii) Write a short note on two of the following explaining their part in movement towards West European unity:—
       the Organisation for European Economic Co-operation (O.E.E.C.);
       the European Coal and Steel Community (E.C.S.C.);
       Western European Union;
       the Council of Europe. (12)

20. Write notes on two of the following:—
   (i) Canada and Imperial Preference.
   (ii) The Security Council of the U.N.O.
   (iii) The composition and election of the Congress of the U.S.A.
   (v) The causes of the Russian Revolution (1917). (10) (10)

SECTION C
Commonwealth Studies

21. (i) What was the importance of The Statute of Westminster (1931)? (6)
   (ii) Suggest reasons why today the term Commonwealth is preferred to that of British Empire. (4)
   (iii) Describe the means by which contact and co-operation between Commonwealth members has been secured since 1945. (10)
22. Farming in Australia has been described as a “war against drought”.
   (i) Discuss the influence of rainfall upon Australian agriculture with reference to wheat growing, fruit growing and dairy farming.  
   (ii) Is rainfall the only limitation on farming in Australia?  
   (iii) Describe briefly the Snowy River Scheme and the benefits it is bringing to Australia.

23. (i) Indicate the main commodities which New Zealand exports to Great Britain, and describe the producing areas for each.
   (ii) What is the importance of this trade to New Zealand?

24. Select any one African country which is a member of the Commonwealth, and describe the natural resources which may assist in its economic development. (Natural resources may be taken to include minerals, soils and climate; vegetation; power resources.)

25. Attempt either (a) or (b).
   (a) (i) What political and economic reasons were advanced for the formation of the Central African Federation?
   (ii) State briefly the grounds of opposition to its formation and indicate what problems have been encountered since the Federation was set up.
   (b) Give an account of two of the following indicating their importance in African affairs:
   Jomo Kenyatta; Dr. Nkrumah; the Secession of the Union (now Republic) of South Africa from the Commonwealth.

Selected Topics

26. (i) Give a short description of the main types of newspaper published in Britain today, showing how they differ.
   (ii) In recent years there has been a tendency to greater concentration of ownership of newspapers.
   (a) What effect has this had so far on the choice of newspapers available to the public?
   (b) What are the possible advantages and dangers of this tendency to concentration of ownership?
   (iii) What measures have been taken in recent years to safeguard the freedom of the Press and maintain good standards in newspapers?
27. Attempt either (a) or (b).

(a) (i) Describe the principal natural resources of China and discuss how they may be used to further industrial development.  

(ii) What difficulties confront China in her great “leap forward” in industry?  

(b) Give a general account of the part played by China in international affairs since the revolution (1949) and select one of the following aspects for more particular treatment: the Korean War; Formosa; membership of U.N.O.  

28. (i) What kinds of assistance were made available by the Colombo Plan?  

(ii) Show how far the Plan has helped in the economic development of either India or Malaya.  

29. Select any one major oil-producing area which supplies the British market. Write a comprehensive account of the transport of oil from this source to your home area.
Before attempting to answer any question, candidates should read the whole of it very carefully, since time is often lost through misapprehension as to what is really required.

Geometrical references are required only in Questions 9 and 13.

Figures should be neatly drawn, and, where it is necessary to turn over a page during the answer to a question, a rough copy of the figure MUST be drawn on the fresh page. Diagrams printed in this question paper need not be copied into the answer book.

Four-place mathematical tables are provided.

Pages of square-ruled paper are included in the answer book.

Marks may be deducted for careless or badly arranged work.

The value attached to each question, or to each part of a question, is shown in the margin.
SECTION I

All the questions in this Section should be attempted.

1. In the diagram, O is the centre of the circle; RS and RT are tangents to the circle; reflex angle TOS = 224°, and angle SRT = x°. Find x.

Marks

(4)
2. In the diagram, UW is the diameter of the semicircle UVW and is 20 cm long; \( UV = VW \). Taking \( \pi = 3.14 \), calculate the total shaded area. (6)

3. The corresponding sides of the two triangles shown in the diagram are parallel. \( XZ = 5 \) units, \( YZ = 9 \) units, and \( MN = 15\frac{3}{4} \) units. Calculate the length of LN. (4)

4. In a triangle PQR, \( PQ = 14 \) units, \( PR = 17 \) units, and angle \( PQR = 115^\circ \). Calculate the size of angle QPR. (5)
5. P and Q are towns of the same longitude such that the arc of the earth’s circumference joining them is 500 miles long. When the sun is directly overhead at Q its rays, assumed parallel, strike P at an angle of $7\frac{1}{2}^\circ$ to the vertical, PR. Use this information to calculate the circumference of the earth.

![Diagram of Earth with town P and Q and angles]

6. ABCD is a rectangle in a horizontal plane with AB = 16 units. The diagonals of the rectangle intersect in O, and OX is a vertical line 15 units long. Calculate the size of the angle between the planes ABCD and XBC.

![Diagram of rectangle ABCD with diagonal and vertical line]

7. A circle with centre O has a radius of 2 in. The radius OA is produced its own length to B and a straight line XBY is drawn in the same plane and perpendicular to OB. State the locus of points which are 2 in from O and not more than 3 in from the line XY.

![Diagram of circle with radius and perpendicular line]
8. A coastguard observed a ship 16 miles away in the direction due South. He also observed a lighthouse 10 miles away on a bearing 60° East of South. Calculate the distance between the ship and the lighthouse.

If the ship was sailing due East, calculate the shortest distance between it and the lighthouse.

9. (i) An acute-angled triangle XYZ is inscribed in a circle with centre O. P is the foot of the perpendicular from O to YZ. Prove that angle YOP = angle YXZ.

(ii) In the diagram the triangles ABD and ACE are equilateral. Prove, by means of congruent triangles, that A, D, B, F are concyclic points.
SECTION II

Only THREE questions should be attempted from this Section.

10. A straight line AB, 16 cm long, is a diameter of a horizontal circle. AB is produced to C so that BC = 2 cm, and CD is a tangent to the circle, touching the circle at D. Calculate the size of the angle DCA.

BP is a vertical line of length 4 cm, and CP is produced to meet a vertical line through A in Q. Calculate the length of AQ and the size of the angle between QD and the horizontal.

11. In a triangle ABC, AB = 6 in, BC = 5 in, and AC = 8 in. The line bisecting angle ACB externally meets AB produced at D. Calculate the lengths of BD and CD.

Calculate also the area of the triangle ABC.

12. (i) A chord of a circle is 12 cm long and cuts the diameter perpendicular to it in the ratio 4 : 1. Calculate the length of the diameter.

(ii) Construct a triangle PQR in which QR = 3 in, PR = 2.5 in, and PQ = 3.5 in. Construct a straight line ST, parallel to QR, with S on PQ and T on PR so that

\[
\frac{\text{area of triangle PST}}{\text{area of triangle PQR}} = \frac{4}{9}
\]

Measure ST.

(The construction should not be stated or proved, but all necessary construction lines and arcs should be clearly shown.)
13. ABCD is a parallelogram in which angle A is acute. The circle through A, D, and C cuts AB produced at E. Show that CE = AD. 

CB is produced to cut the circle at F, and DB is produced to cut the circle at G. Prove that the triangles ADB and GBF are similar. 

Deduce that CE . FG = AB . BG. 

14. Two ships, A and B, were observing the vertical descent of a parachute, P. B was stationed due East of A. From A the parachute was observed to be 12 miles away (i.e. AP = 12 ml) at an angle of elevation of 34°, and its point of landing was estimated to bear 40° 30' North of East. From B the angle of elevation of the parachute was observed to be 37°. 

Calculate:——

(i) the distance of each ship from the estimated point of landing of the parachute; 

(ii) the bearing of the landing point from B.
MATHEMATICS

Ordinary Grade—(Second Paper)

Thursday, 2nd May—1.30 p.m. to 3.30 p.m.

Before attempting to answer any question, candidates should read the whole of it very carefully, since time is often lost through misapprehension as to what is really required.

Four-place mathematical tables are provided.

Pages of square-ruled paper are included in the answer book.

All the working must be legible and shown in its proper position in the answer, and the different steps should be clearly indicated.

Marks may be deducted for careless or badly arranged work.

The value attached to each question, or to each part of a question, is shown in the margin.

SECTION I

All the questions in this Section should be attempted.

1. Simplify
   \[ (3x + 2y)^2 - (x - 2y)(3x - 2y). \]  
   \[ (5) \]

2. Use logarithms to evaluate
   (i) \[ \sqrt[3]{0.1234}; \]
   (ii) \[ \frac{5.63}{\sin 39^\circ 8'} . \]
   \[ (3, 3) \]
3. Solve the equations

(i) \(2x - \frac{x - 1}{2} = 2 - x\);

(ii) \(5x^2 - x - 2 = 0\), giving the roots correct to two decimal places.

4. (Do not use mathematical tables in this question.)

(i) Evaluate \((a^2 - b^2)^{-\frac{3}{2}}\) when \(a = 5\) and \(b = 4\).

(ii) If \(\frac{x}{\sqrt{5}} + \frac{1}{\sqrt{20}} = \sqrt{5}\), find the value of \(x\).

5. (i) Use tables, where necessary, to find the values of \(x\) and \(y\) between \(0^\circ\) and \(180^\circ\) such that

   (a) \(\log \tan x = 1.8000\);

   (b) \(\tan y + \tan 40^\circ 10' = 0\).

(ii) In the triangle ABC, \(AB = 10\) in, \(BC = 12\) in, and the area of the triangle is 36 sq. in.

   Calculate the two possible values of the angle B, and find the larger of the two possible values of the side AC.

6. (i) The price of a dress is subject to a discount of \(b\) shillings in the £. If the marked price is £\(m\), how much, in £, is actually paid for the dress?

(ii) A length of wire is bent into the shape of a rectangle whose sides are in the ratio 3 : 2. If the area of the rectangle is 13\(\frac{1}{2}\) sq. in., how long is the wire?

7. (i) The diameter, \(d\) cm, of a solid spherical ball varies directly as the cube root of the weight, \(W\) gm.

   When the diameter is 15 cm the weight is 8 Kg.

   Express \(d\) in terms of \(W\).

(ii) In a right-angled triangle, \(a\) and \(b\) are the lengths of the sides about the right angle and \(p\) is the length of the altitude drawn to the hypotenuse.

   Prove that \(ab = p\sqrt{(a^2 + b^2)}\), and express \(a\) in terms of \(b\) and \(p\).
8. The diagram shows the journey of an aircraft from A to B and back. The time is given in the 24-hour notation.

(i) Find from the graph

(a) the distance from A to B;
(b) the time of departure from B;
(c) how many miles of the return journey have been covered by 15.54 hours;
(d) the speed at which the aircraft covered the ground on the journey from A to B;
(e) the corresponding speed for the journey from B to A.

(ii) Assuming a headwind of 40 m.p.h. on one trip and a tailwind of 40 m.p.h. on the other, calculate the speed which the aircraft could maintain in still air.
SECTION II
Only TWO questions should be attempted from this Section.

9. (i) If \( x = a - b \) and \( \frac{1}{y} = \frac{1}{a} - \frac{1}{b} \), prove that \( xy = -ab \) and that \( x^2 - 2xy = a^2 + b^2 \).

If, further, \( ab = 6 \) and \( a^2 + b^2 = 16 \), find the values of \( x \) and \( y \). (8)

(ii) From the formula \( T = 2\pi \sqrt{\frac{h^2 + k^2}{hg}} \), find \( T \) given \( h = 16.5 \), \( k = 11.7 \), \( g = 981 \), and \( \pi = 3.142 \). (6)

10. (i) A ball whose diameter is 3\( \frac{3}{8} \) in rests on a horizontal ring of diameter 2 in. Calculate the distance of the bottom of the ball below the level of the ring. (7)

(ii) A train is scheduled to travel a 90 mile journey in a certain time. On a particular day, owing to track repairs, its average speed was reduced by 4 miles per hour and it arrived 15 minutes late. How long is the train scheduled to take for the journey? (7)

11. (i) Determine the range of values of \( x \) between 0° and 180° for which \( \cos^2 x \) is less than \( \frac{1}{4} \). (6)

(ii) In carrying out a search, a ship sails from a harbour, H, north-eastwards to a position, P, and then north-westwards to a marker buoy, M, which is situated 1 mile east and 5 miles north of H.

If HP = \( x \) miles, and PM = \( y \) miles, prove that \( x + y = 5\sqrt{2} \).

Obtain a second linear equation for \( x \) and \( y \), and hence or otherwise find \( x \) and \( y \) correct to two decimal places. (8)
12. The height, \( y \) ft, above a cricket field of a cricket ball thrown from shoulder height when the ball has travelled \( x \) ft horizontally from the thrower is given by the relation
\[
y = 5 + px + qx^2,
\]
where \( p \) and \( q \) are constants.

(a) If \( y = 30 \) when \( x = 15 \), and \( y = 5 \) when \( x = 90 \), find \( p \) and \( q \). (4)

(b) During its flight the ball passes over a wall 10 ft high at a horizontal distance of 75 ft from the thrower. By how many feet does the ball clear the wall? (3)

(c) How far, to the nearest foot, is the ball from the thrower when it hits the ground? (5)

(d) Using considerations of symmetry and giving brief reasons, find how far the ball has travelled horizontally when it reaches its greatest height above the field. (2)
...
Before attempting to answer any question, candidates should read the whole of it very carefully, since time is often lost through misapprehension as to what is really required.

Figures should be neatly drawn, and, where it is necessary to turn over a page during the answer to a question, a rough copy of the figure MUST be drawn on the fresh page. Diagrams printed in this question paper need not be copied into the answer book.

Four-place mathematical tables are provided.

Pages of square-ruled paper are included in the answer book.

Marks may be deducted for careless or badly arranged work.

The value attached to each question, or to each part of a question, is shown in the margin.
SECTION I

All the questions in this Section should be attempted.

Marks

1. With the usual notation for the sides and angles of a triangle and assuming that

\[ \cos A = \frac{b^2 + c^2 - a^2}{2bc}, \]

prove that

\[ \cos \frac{1}{2}A = \sqrt{s(s-a)/bc}. \] (5)

Calculate the size of the greatest angle of the triangle whose sides are of lengths 13 in, 19 in, and 22 in. (4)

2. Establish the formula for the distance between the points \((x_1, y_1)\) and \((x_2, y_2)\). (5)

The vertices of a triangle are the points A \((2, 10)\), B \((-8, -10)\), and C \((4, -1)\). The internal bisector of the angle BAC meets BC at D; find the coordinates of D. (5)

AD meets the altitude CF at K; find the coordinates of K. (4)

3. The altitudes BE and CF of a triangle ABC intersect at H, and L, M, and N are the mid-points of BC, EF, and AH respectively.

Name two quadrilaterals in the figure which are cyclic, and prove that L, M, and N are collinear. (6)
4. L is any point on the side YZ of a triangle XYZ; LM is parallel to ZX, MN is parallel to YZ, NU is parallel to XY, UV is parallel to ZX, VW is parallel to YZ.

Prove that the line through W parallel to XY passes through L.

If also \( \frac{YL}{LZ} = 1:3 \), what fraction of the area of the triangle XYZ is the area of the hexagon LUNWVM?

5. The points P and Q are respectively 25 cm and 40 cm distant from the centre of a circle of radius 24 cm.

Prove, without using tables, that the angle between the tangents from P to the circle is double the angle between the tangents from Q to the circle.

6. The rectangle ABCD with AB = 24 units and BC = 18 units lies in a horizontal plane. The point P is 20 units vertically above A and the point Q is 8 units vertically above C.

(i) Find the length of PQ, leaving your answer in surd form.
(ii) Calculate the size of the angle which PQ subtends at the centre of the rectangle.
SECTION II

Only THREE questions should be attempted from this Section.

7. Prove that the equation $x^2 + y^2 + 2gx + 2fy + c = 0$ represents a circle.

The point $P$ lies on the line $x = 2$ and $Q$ is the point on $OP$ such that $OQ = \frac{4}{OP}$, where $O$ is the origin. If angle $XOP = \theta$, show that the coordinates of $Q$ are given by

$$x = 2 \cos^2 \theta, \quad y = 2 \cos \theta \sin \theta.$$  

Prove that, as $\theta$ varies, $Q$ describes a circle and determine the centre and radius of this circle.

8. The first of two circles has its centre, $C$, on the circumference of the second and the circles intersect at $A$ and $B$. On the minor arc $AB$ of the first circle a point $D$ is taken nearer to $A$ than to $B$ and $CD$ is produced to meet the second circle at $E$.

(i) Prove that $EC$ bisects the angle $AEB$.  

(ii) Prove that angle $ABD = \frac{1}{2}$ (angle $ABE$), and that $D$ is the incentre of the triangle $ABE$.  

(iii) If $EA$ produced and $EB$ cut the first circle at $F$ and $G$ respectively, prove that $FG$ is a tangent to the incircle of the triangle $ABE$.

9. A cube has the faces $ABCD$ and $EFGH$ horizontal, and the edges $AE$, $BF$, $CG$, and $DH$ vertical; $P$, $Q$ are the mid-points of $AB$ and $GH$ respectively.

(i) Prove that $PQ$ and $FD$ intersect and that $PQ$ is perpendicular to $FD$.  

(ii) If $R$, $S$ are the mid-points of $AE$ and $CG$ respectively, find the angle between the planes $FPQ$ and $FRS$.  

Page four
10. On the sides AB, AC of a triangle ABC, equilateral triangles ABF, ACE are drawn outside the triangle ABC. N is the centroid of the triangle ABF and M is the centroid of the triangle ACE.

By applying the cosine formula to the triangle AMN, or otherwise, prove that

\[ MN^2 = \frac{1}{6} \left( b^2 + c^2 + a^2 + \frac{abc\sqrt{3}}{R} \right), \]

where R is the radius of the circumcircle of triangle ABC. \hspace{1cm} (12)

If the equilateral triangle BCD is drawn outwards on BC and L is the centroid of this triangle, show that the triangle LMN is equilateral. \hspace{1cm} (5)

11. A variable chord CD of a circle is perpendicular to a fixed diameter AB and meets AB at P. If \( AP = x \), show that the area of the triangle ACD is given by \( \sqrt{x^3} (d - x) \), where \( d \) is the diameter of the circle. \hspace{1cm} (5)

Find the position of P for which this area is a maximum. \hspace{1cm} (7)

Hence, or otherwise, determine the shape of the triangle of maximum area which can be inscribed in a given circle. \hspace{1cm} (5)
Before attempting to answer any question, candidates should read the whole of it very carefully, since time is often lost through misapprehension as to what is really required.

All the working must be legible and shown in its proper position in the answer, and the different steps should be clearly indicated.

Four-place mathematical tables are provided.

Pages of square-ruled paper are included in the answer book.

Marks may be deducted for careless or badly arranged work.

The value attached to each question, or to each part of a question, is shown in the margin.

SECTION I

All the questions in this Section should be attempted.

1. (i) Solve the equations
   \[ x + y + z = 4, \]
   \[ 4x + 2y + 3z = 11, \]
   \[ 5x - 3y - 2z = 3. \]  
   Marks
   (6)

(ii) Factorise
   \[ 2x^3 + x^2 - 15x - 18. \]  
   (4)

(iii) From the relation \( T = \sqrt{\left( H^2 + \frac{\omega^2 L^2}{4} \right)} \), express \( \omega \) in terms of \( T, H, \) and \( L. \)  
   (3)
2. (i) Find the ranges of values of \( x \), between 0° and 180°, for which \( \cos 3x \) is positive. (4)

(ii) Find the length of the perimeter of a sector of a circle of radius 3 units, if the area of the sector is 18 square units. (4)

3. (i) Integrate with respect to \( x \)

\[(a) \quad 8x^3 + 1 - \frac{4}{x^3} ; \quad (b) \quad (3x - 1)^\frac{5}{4}.\] (3, 2)

(ii) If the sum of the length and the circumference of a cylinder is 6 ft, find the circumference when the volume is a maximum. (6)

4. (i) For what range of values of \( x \) is the function

\[x^2 - 8x - 9\]

both negative and decreasing? (5)

(ii) Find a fourth proportional to

\[a^{k-2}, \quad a^{k+2}, \quad a^{k-3}.\] (3)

(iii) Simplify

\[x^{-\frac{1}{2}}(2x + 1)^{\frac{5}{3}} - 4x^{\frac{3}{2}}(2x + 1)^{-\frac{1}{2}}.\] (4)

5. (i) A quantity \( I \) is given by the formula

\[I = e^{-\frac{t}{10}} \sin t,\]

where \( t \) is in radian measure. Calculate, correct to three significant figures, the value of \( I \) when \( t = 2 \), given that \( e = 2.718 \) and \( \pi = 3.142 \). (6)

(ii) Solve the equation

\[4.4^x + 2 = 9.2^x.\] (4)

6. A sphere is expanding so that its volume is increasing at the uniform rate of 3 c.c. per second. Find the rate of increase of its surface at the instant when the radius is 5 cm.

\[\text{Volume of sphere} = \frac{4}{3} \pi r^3 ;\]

\[\text{Surface of sphere} = 4\pi r^2.\] (6)
7. Find all the values of $\theta$ between $0^\circ$ and $360^\circ$ which satisfy the equation
\[ \cos \theta (2 - \cos^2 \theta) = 2 \sin 2\theta. \]

8. It was suspected that the relationship between two quantities $x$ and $y$ could be expressed in the form $y = kx^n$, where $k$ and $n$ are constants. From corresponding values of $x$ and $y$, $\log_{10} y$ was plotted against $\log_{10} x$ and a best-fitting straight line was drawn through the points as shown in the accompanying diagram. Show that the assumption was a reasonable one, and find $k$ and $n$. 

![Diagram showing a straight line on a log-log graph with axes labeled $\log_{10} x$ and $\log_{10} y$.]
SECTION II

Only TWO questions should be attempted from this Section.

9. Write down a formula for the amount at compound interest of £1 at the end of $n$ years at $r$ per cent per annum.

A man is appointed to a post at an initial salary of £500 per annum with an annual increment of £40. Find the total salary he will receive in the first 10 years of his employment.

The firm credits him with £50 deferred pay at the end of each completed year of service. If these sums earn interest at 4 per cent per annum compound interest, find the amount of deferred pay plus interest expected by the man if he leaves the firm after completing 25 years service.

Take $\log_{10} 1.04 = 0.0170333$. (14)

10. Write down the condition that the roots of the equation $ax^2 + bx + c = 0$ are not real.

Show that, if $y = \frac{x^2 + 4}{x}$ then, for real values of $x$, $y$ cannot lie between $-4$ and $+4$.

If $y = \frac{5 + 3 \cos \theta}{\sin \theta}$, express $y$ in terms of $t$, where $t = \tan \frac{1}{2} \theta$.

Hence or otherwise determine the maximum and minimum values of $y$ and the corresponding values of $\theta$ between $0^\circ$ and $360^\circ$. (14)
11. (i) Express \(\sin^4 A\) in the form \(p + q \cos 2A + r \cos 4A\).

(ii) Establish the identity
\[
\frac{\sin (B - C)}{\cos B \cos C} = \tan B - \tan C.
\]

By applying this result successively to each term of the series
\[
\frac{\sin \theta}{\cos \theta \cos 2\theta} + \frac{\sin \theta}{\cos 2\theta \cos 3\theta} + \frac{\sin \theta}{\cos 3\theta \cos 4\theta} \ldots,
\]
or otherwise, show that the sum of \(n\) terms of this series is
\[
\frac{\sin n\theta}{\cos \theta \cos (n + 1)\theta}.
\]

12. (i) Find the equation of the tangent at the point where \(x = -1\) on the curve \(y = x^2 (x + 1) (x - 3)\).

Show that this tangent touches the curve again and find the coordinates of this second point of contact.

(ii) Find the area enclosed between the parabolas
\[
y = x^2 - 4x \text{ and } y = 6x - x^2.
\]
APPLIED MATHEMATICS

Ordinary Grade

Monday, 29th April—1.30 p.m. to 3.30 p.m.

Before attempting to answer any question, candidates should read the whole of it very carefully, since time is often lost through misapprehension as to what is really required.

Candidates should, where necessary, illustrate their solutions by suitable diagrams.

Four-place mathematical tables are provided.

Pages of square-ruled paper are included in the answer book.

In the answers to arithmetical examples units must be stated.
Take \( g = 32 \).

Marks may be deducted for careless or badly arranged work.

The value attached to each question, or to each part of a question, is shown in the margin.
SECTION I

All the questions in this Section should be attempted.

Marks

1. The diagram shows the speed of a car during a test in which it started from rest, accelerated to a speed of 60 miles per hour, and then braked to rest.

Find

(i) the acceleration of the car in feet per second per second;
(ii) the total distance travelled. (9)
2. A tower 100 ft high stands on horizontal ground; from the top of the tower a particle is projected horizontally with a velocity of 30 ft per sec. How far from the foot of the tower will the particle strike the ground? (10)

3. The diagram shows an aerial wire AB fastened to a vertical mast AC and rising at an angle of 10° to the horizontal. The mast is supported by a guy wire AD inclined at an angle of 62° to the horizontal. AB, AC, AD are co-planar.

If the tension in the wire AD is 15 lb.wt. and the mast exerts no sideways thrust, find, by calculation or by drawing,
(i) the tension in the aerial wire AB;
(ii) the force exerted by the mast to maintain these tensions. (10)

4. Masses of 11 lb and 5 lb hang freely at the ends of a light inextensible cord which passes over a smooth pulley.
Find
(i) the acceleration of the masses;
(ii) the tension in the cord.
If the masses are released from rest, find how long it takes for the heavier mass to descend 54 ft. (4)

5. From a uniform plate in the form of a square ABCD of side 12 inches, a triangular part is removed, the vertices of the triangle being at A, B, and O, the centre of the square. Find the position of the centre of gravity of the remainder. (9)
6. A mass of 30 lb is placed on a plane inclined at an angle $\theta$ to the horizontal such that $\tan \theta = \frac{3}{4}$; the coefficient of friction between the mass and the plane being $\frac{1}{3}$. A cord, inclined to the plane at the same angle $\theta$ in the upward direction, is tending to pull the mass up the plane. Find the least force exerted by the cord which will be just sufficient to move the mass up the plane.

If this force is reduced to 10 lb.wt., find the acceleration of the mass. (16)

7. Explain what is meant by the conservation of linear momentum. A mass of 10 lb moving due North with velocity 5 ft per sec collides and coalesces in succession with three masses each of 2 lb and each moving due South with velocity 3 ft per sec. Find the magnitude and direction of the final velocity. Find also, in ft.lb.wt., the total energy lost during the impacts. (16)

8. A locomotive is travelling at a uniform speed of 30 miles per hour along a level track. If the locomotive is working at 80 h.p., find the total resistance to motion.

If the total resistance to motion remains constant and the locomotive is of mass 100 tons, find the additional tractive force required to produce an acceleration of $\frac{1}{4}$ ft per sec per sec.

If the maximum horse power at which the locomotive can work is 500, for how long could this acceleration be maintained? (16)
9. (i) A rigid body is acted upon by a number of coplanar forces such that the algebraic sums of the components of the forces in two separate directions are zero. What further condition is necessary to ensure equilibrium? If this condition is not satisfied, what is the nature of the resultant?

(ii) A rigid framework is in the form of a quadrilateral ABCD such that AB = 2 ft, AD = 4 ft, angle BAD = angle BCD = 90°, angle ABC = 135°.

Forces act along the sides as follows:

\[ \sqrt{2} \text{ lb.wt. along AB,} \]
\[ 2 \text{ lb.wt. along BC,} \]
\[ 4 \text{ lb.wt. along CD,} \]
\[ \text{and } 3\sqrt{2} \text{ lb.wt. along DA.} \]

Show that these forces are not in equilibrium.

Determine what additional forces acting along AB, AD, and CB would produce equilibrium. (16)
Before attempting to answer any question, candidates should read the whole of it very carefully, since time is often lost through misapprehension as to what is really required.

Four-place logarithmic tables and tables of square roots are provided. The use of logarithms is permitted only in questions 7 and 8.

All the working must be legible and shown in its proper position in the answer, and, when necessary, the different steps should be clearly indicated.

Marks may be deducted for careless or badly arranged work.
SECTION I

All the questions in this Section should be attempted.
35 marks are assigned to this Section.

1. (a) In a race, the times taken by a yacht in successive circuits were 3 hours 58 minutes 48 seconds, 4 hours 12 minutes 35 seconds, and 3 hours 53 minutes 16 seconds. Find the average time taken by the yacht for one circuit.

(b) Find the cost of 3 tons 16 cwt 1 qr of coal at £8 10s per ton.

(c) A man notes that for £1 he could obtain 11.2 German marks or 13.72 French francs. How many francs could he obtain for 1,960 marks?

(d) A rectangular field is 1 furlong in length and 93.5 yards in width. Find its area in acres.

(e) An inkwell holds 9.75 cubic centimetres of ink. How many inkwells can be completely filled from a bottle containing 1 litre of ink?

(f) The accompanying pie-chart (opposite), shows accurately how a family allocates its annual income to food, rent, savings, fuel, and miscellaneous items. What percentage of its annual income is given to savings?

2. (i) During the course of a year a motor car used 287 gallons of petrol costing 4s 10½d per gallon, and 2 gallons 1 quart 1 pint of oil at 2s 4d per pint. Taxation, insurance, repairs, etc. amounted to £32 15s 9d, and garaging cost £2 17s 6d per month. Find the total cost of running the car for the year.

(ii) A car cost £875 when new and its value depreciated each year by 15 per cent of its value at the beginning of that year. Find the value of the car at the end of two years.

Page two
SECTION II

Only FIVE questions should be attempted from this Section.
13 marks are assigned to each question.

3. (i) A man took out a life insurance policy for £2,500 for which he was to pay an annual premium of 43s per £100. If he was allowed income tax relief at the rate of 7s 9d in the £ on two-fifths of the premium, find the actual sum of money which he had to pay annually.

Assuming that the income tax relief remained unchanged, after how many years would his net outlay first exceed the sum payable on his death?

(ii) Calculate what sum of money invested at $2\frac{1}{2}$ per cent per annum simple interest would amount to £4,200 in 8 years.

4. In one term, a school tuck shop sold confectionery to the value of £78 15s thereby making a profit of 5 per cent, ice-cream to the value of £56 5s making a profit of $12\frac{1}{2}$ per cent, and potato crisps to the value of £27 making a profit of 8 per cent, the profit in each case being calculated on the cost price.

Calculate the total cost price of this food and also the overall percentage profit.

By how much would the sales of ice-cream have to be increased in order to make the overall profit 10 per cent?
5. Use the following instructions to find, in miles, the approximate distances of the planets Mercury, Venus, Earth, and Mars, respectively, from the Sun.

(i) Write down the series of numbers 0, 1, 2, 4.
(ii) Multiply each number by 3.
(iii) Add 4 to each of these answers.
(iv) Multiply each of these results by 9.3 million to obtain the required distances.

Assuming that the planets move in the same plane in concentric circles with the Sun at the centre, find how near to the Earth each of the planets Mercury, Venus, and Mars can approach.

If the Earth completes a circle in 365 days, use the distance of the Earth from the Sun obtained in (iv) to calculate its speed round the Sun, to the nearest thousand miles per hour.

Take \( \pi = 3.14 \).

6. A man is considering the investment of £750 either in National Savings Certificates or in 3\( \frac{1}{2} \) per cent War Stock.

National Savings Certificates cost 15s each and at the end of 7 years are worth 20s each. The War Stock is standing at 60.

Assuming that the War Stock remains at 60, find which of the two investments would be financially better for the man by the end of 7 years, and by how much.

In fact he bought the War Stock but, on selling after 7 years, he found that, with the interest, it gave him the same amount as the National Savings Certificates would have done. At what price was the War Stock standing when he sold?

(You may use mathematical tables in Questions 7 and 8.)

7. (i) Evaluate \( \sqrt[3]{(9.24^2 + 8.53^2)} \).

(ii) An athlete ran 100 yards in 10.3 seconds. Calculate his average speed in miles per hour, expressing your answer correct to one place of decimals.
8. An electrical cable consists of three copper wires embedded in insulating material. The cable has a circular cross-section of diameter 0.22 inch, and each copper wire has a circular cross-section of diameter 0.029 inch.

If the insulating material weighs 0.042 lb per cubic inch and copper weighs 0.32 lb per cubic inch, calculate the weight of a 50 yard length of the cable.

Take $\pi = 3.142$.

9. To assist an outfitter who sells boys' raincoats, the heights (to the nearest inch) of a group of schoolboys were measured and noted as follows:

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Make a frequency distribution table of the heights (for each inch) and calculate the mean height.

Assuming that this sample is representative of 1,200 boys in the same age group in the district, and that raincoats are sold thus:

- Size 1 for heights 4 ft 8 in—4 ft 9 in,
- Size 2 for heights 4 ft 10 in—4 ft 11 in,
- Size 3 for heights 5 ft 0 in—5 ft 1 in, and so on,

find how many coats of each size the outfitter would require to stock in order to be in a position to supply all the boys in the district.
SCOTTISH CERTIFICATE OF EDUCATION

ELEMENTARY ANALYSIS

Additional Mathematical Subject

Monday, 29th April—9.30 a.m. to 12 noon

Before attempting to answer any question, candidates should read the whole of it very carefully, since time is often lost through misapprehension as to what is really required.

Not more than FOUR questions should be attempted from Section I, and not more than TWO questions from Section II.

Four-place mathematical tables are provided.

Pages of square-ruled paper are included in the answer book.

Marks may be deducted for careless or badly arranged work.

The value attached to each question, or to each part of a question, is shown in the margin.
SECTION I

Not more than FOUR questions should be attempted from this Section.

1. (i) Find the general solution of the equation

\[ \sin \left( x + \frac{\pi}{10} \right) \cos \left( x - \frac{\pi}{5} \right) = \sin \frac{\pi}{5} \cos \frac{\pi}{10}. \] (5)

(ii) Without using tables determine which is the larger of the acute angles

\[ \tan^{-1} \frac{1}{3} + \tan^{-1} \frac{1}{5}, \quad \tan^{-1} \frac{1}{2} + \tan^{-1} \frac{1}{8}. \] (5)

(iii) Eliminate \( \theta \) from the equations

\[ x = \sin 3\theta, \]
\[ y = \cos 2\theta. \] (5)

2. (i) Show that \( \frac{1}{2} (a + b + c) \) is a root of the equation

\[ \begin{vmatrix} a-x & b-x & c \\ a-x & c & b-x \\ a & b-x & c-x \end{vmatrix} = 0, \]

and find the other roots of the equation. (6)

(ii) By using determinants, show that the equations

\[ x + y + z = 0, \]
\[ 2x - y + az = 0, \]
\[ 2x + y + bz = 0 \]

have a non-zero solution for \( x, y, z \) if and only if \( a = 3b - 4 \).

Find a non-zero solution for \( x, y, z \) in the particular case when \( b = 0 \) and \( a = -4 \). (9)

Page two
3. (i) Prove the formula \( \sum_{r=1}^{n} r^3 = \frac{1}{4} n^2 (n + 1)^2. \) \((\text{The formulae}
\sum_{r=1}^{n} r^2 = \frac{1}{6} n (n + 1) (2n + 1) \text{ and } \sum_{r=1}^{n} r = \frac{1}{2} n (n + 1) \text{ may be assumed, if required.})

Show that the \( n \)th term of the series
\[ u_1 + u_2 + u_3 + \ldots, \]
where \( u_1 = 1^3, u_2 = 2^3 + 3^3, u_3 = 4^3 + 5^3 + 6^3, \ldots, \)
is equal to \( \frac{1}{8} n^3 (n^2 + 1) (n^2 + 3). \)  

(ii) A sequence of real numbers \( a_1, a_2, a_3, a_4, \ldots \) is defined in terms of a given positive real number \( a_1 \) by the equations
\[ a_{n+1} = \frac{1}{2} \left( a_n + \frac{4}{a_n} \right) \quad (n \geq 1). \]

Show that 
\[ a_{n+1} \geq 2. \]

4. (i) Find in simplest form the derivatives of
\[ (a) \frac{1}{2 - \sin x}; \quad (b) e^{2x} \sqrt{x^2 + 1}. \]

(ii) For the curve
\[ y = x \cos (\log x), \]
show that \( \frac{d^2 y}{dx^2} \) can be expressed in the form
\[ \frac{\sqrt{2}}{x} \cos (\alpha + \log x) \] with \( \alpha \) a constant.

Show that the curve has turning points at the points given by \( x = e^{\frac{\pi}{4} + n\pi} \), where \( n \) is an integer. Determine the nature of these turning points, separating the cases \( n \) even and \( n \) odd.
5. (i) Integrate with respect to \( x \)

\[
\begin{align*}
(a) & \quad \frac{x^2}{\sqrt{1 - x^2}}; \\
(b) & \quad \frac{\log x}{(1 + x)^2}.
\end{align*}
\] (4, 5)

(ii) If \( 0 \leq x \leq 1 \), show that \( 1 - x^2 \leq 1 - x^6 \leq 1 \), and hence show that

\[
1 < \frac{1}{\sqrt[4]{1 - x^6}} < 1.571.
\] (6)

SECTION II

Not more than TWO questions should be attempted from this Section.

6. (i) Write down the power series expansions of \( \cos x \) and \( \log_e (1 + x) \) as far as the term in \( x^4 \).

If \( x \) is small, expand \( \log_e (2 - \cos x) \) as far as the term in \( x^4 \). (6)

(ii) Given that

\[
\frac{\pi}{4} = \frac{1}{1} - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} + \ldots,
\]

and \( \log_e 2 = \frac{1}{1} - \frac{1}{2} + \frac{1}{3} - \frac{1}{4} + \ldots \),

find the sum to infinity of the series

\[
\frac{1}{1.2} - \frac{1}{3.4} + \frac{1}{5.6} - \frac{1}{7.8} + \ldots.
\] (7)

(iii) Discuss, for real values of \( x \), the convergence of the series

\[
\sum_{n=1}^{\infty} \frac{2^n x^n}{3^n (2n - 1)}.
\] (7)
7. For the curve \( y = \frac{x}{\sqrt{4 - x^2}} \) prove the following facts.

(a) The curve lies in the region between the lines \( x = \pm 2 \).

(b) The curve has no turning points and only one point of inflexion.

(c) The curve has two asymptotes.

Determine the shape of the curve in the neighbourhood of the point of inflexion, and sketch the curve. (12)

Calculate the area enclosed by the curve and the line \( y = x \). (8)

8. (i) Evaluate \( \int_0^1 x e^{-x} \, dx \). (3)

(ii) Given that

\[ \frac{3}{1 + x^3} = \frac{1}{1 + x} + \frac{2 - x}{1 - x + x^2}, \]

prove that

\[ \int_0^2 \frac{dx}{1 + x^3} = \frac{1}{6} \log_e 3 + \frac{\pi}{2\sqrt{3}}. \] (8)

(iii) Prove that \( \int_0^a f(x) \, dx = \int_0^a f(a - x) \, dx. \)

If

\[ I = \int_0^{\frac{\pi}{2}} \frac{b \cos^3 x + c \sin^3 x}{\cos x + \sin x} \, dx, \]

prove that \( I = \frac{1}{2} (b + c) \int_0^{\pi/2} \frac{\cos^3 x + \sin^3 x}{\cos x + \sin x} \, dx \), and hence

show that \( I = \frac{1}{4} (b + c) (\pi - 1). \) (9)

9. [TURN OVER]
9. (i) Find the real numbers \(x\) and \(y\) such that
\[
\frac{1}{x + iy} + \frac{1}{2 + i} = \frac{1}{3 + i}.
\]
(ii) Express \(\sqrt{3} - i\) in the form \(r(\cos \theta + i \sin \theta)\), and find the three roots of the equation \(z^3 - 4(\sqrt{3} - i) = 0\).
(iii) If \(a = r(\cos \alpha + i \sin \alpha)\) and \(z = \cos \theta + i \sin \theta\), where \(r, \alpha, \theta\) are real and \(r\) is positive, show that
\[
|z + a|^2 = (1 + r)^2 - 4r \sin^2 \frac{\theta - \alpha}{2}.
\]
Hence show that, if \(a\) is such that \(|z + a| \leq 2\) for all values of \(\theta\), then \(r \leq 1\).
Before attempting to answer any question, candidates should read the whole of it very carefully, since time is often lost through misapprehension as to what is really required.

Not more than FIVE questions should be attempted, of which TWO should be chosen from Section I, TWO from Section II, and a FIFTH from EITHER Section.

Where geometrical references are necessary in written proofs, care should be taken to ensure that such references are clear and intelligible. Textbook reference numbers should NOT be used.

Marks may be deducted for careless or badly arranged work.

The value attached to each question, or to each part of a question, is shown in the margin.
1. Prove that the lines which bisect the angles between the lines
\[ ax^2 + 2hxy + by^2 = 0 \]
are given by
\[ \frac{x^2 - y^2}{a - b} = \frac{xy}{h}. \]
(7)

A rectangle OABC has two opposite vertices, O and B, at the points (0, 0) and (1, −7) respectively, and its diagonals in the directions given by the lines
\[ 7x^2 - 6xy - y^2 = 0. \]
Find (a) the equation of the diagonal AC, and (b) the second degree equation which gives the lines OA and OC. (3, 4)

Verify that the equation
\[ 3x^2 + 8xy - 3y^2 + 50(x - y - 4) = 0 \]
represents a pair of straight lines, and show that they are BA and BC. (6)

2. If the point \((x_1, y_1)\) is the pole of the line \(lx + my + n = 0\) with respect to the circle \(x^2 + y^2 = a^2\), prove that
\[ x_1 = -\frac{a^2l}{n} \quad \text{and} \quad y_1 = -\frac{a^2m}{n}. \]
(4)

(i) Find the coordinates of the pole, P, with respect to the circle \(x^2 + y^2 = 4\) of the line \(x(2 + \cos \theta) + y \sin \theta - 1 = 0\), where \(\theta\) is a variable parameter.

Find also the locus of P as \(\theta\) varies. (6)

(ii) P and Q are the poles of the lines \(2x - y - 2k = 0\) and \(x - y + k = 0\) respectively with respect to the circle \(x^2 + y^2 = 25\). Find, in terms of \(k\), the coordinates of the pole of PQ.

Find also the values of \(k\) for which PQ touches the circle. (5, 5)
3. Assuming, if you wish, the equation of the tangent at a point on the parabola \( y^2 = 4ax \), prove that the tangents at the points \((ap^2, 2ap), (aq^2, 2aq)\) on this curve meet at the point \([ap(q - a), a(p + q)]\).

UV is a focal chord of the parabola \( y^2 = 4ax \) and UW is a chord such that UV and UW are equally inclined to the axis of the parabola. If \( u, v \) are the parameters of U and W respectively, prove that \( v = \frac{1}{u} - 2u \), and that, as U varies, the locus of the intersection of the tangents at U and W is the cubic curve \( a(x + a)^2 = 2y^2(a - x) \).

Find the finite values of \( u \) which locate W at the vertex of the parabola, and determine the coordinates of the corresponding points on the above cubic curve.

4. Prove that, if the line \( y = mx + c \) touches the ellipse \( \frac{x^2}{a^2} + \frac{y^2}{b^2} = 1 \), then \( c = \pm \sqrt{(a^2m^2 + b^2)} \).

Tangents are drawn from the point \((4, 6)\) to the ellipse \( \frac{x^2}{25} + \frac{y^2}{9} = 1 \). If their gradients are denoted by \( m_1, m_2 \), show that \( m_1 \) and \( m_2 \) are the roots of the equation \( 3m^2 + 16m - 9 = 0 \). These tangents cut the major axis of the ellipse at P and Q. Prove that the mid-point of PQ trisects SS', where S and S' are the foci of the ellipse.

5. Prove that the mid-points of chords of the hyperbola \( \frac{x^2}{a^2} - \frac{y^2}{b^2} = 1 \) which have gradient \( m \) lie on the diameter whose equation is \( y = \frac{b^2x}{a^2m} \).

P is the point \( \left(5, \frac{8}{3}\right)\) on the hyperbola \( \frac{x^2}{9} - \frac{y^2}{4} = 1 \). Find the equation of the chord UV which passes through the point \((6, 2)\) and which is parallel to the tangent at P.

Find, also, the coordinates of the mid-point of UV and verify that this point is also the mid-point of HK, where H and K are the points where UV cuts the asymptotes of the hyperbola.
6. P is a point on the side GH of the triangle FGH. Points Q and R are taken on FH and FG respectively such that GQ and HR intersect on FP. QR cuts GH at S. By applying the theorems of Ceva and Menelaus, prove that P and S divide GH internally and externally in the same ratio.

In the triangle ABC, the excircle opposite to A touches BC, CA, AB at P, Q, R respectively. Prove that AP, BQ, and CR are concurrent.

If QR cuts BC at L, RP cuts CA at M, and PQ cuts AB at N, prove that L, M, and N are collinear and that the line of collinearity is the polar with respect to the excircle of the point at which AP, BQ, and CR are concurrent.

7. Prove that the arms of an angle and its internal and external bisectors form a harmonic pencil.

AB is a chord of a circle and CD the diameter at right-angles to AB. P is any point on the circumference of the circle.

(i) Prove that PC and PD harmonically separate PA and PB.

(ii) If, further, CD cuts AB in M, and X and Y are the feet of the perpendiculars from A and B respectively to CP, prove that MY is parallel to AP and that MX and MY harmonically separate MB and MP.

8. Define inverse points and prove that any circle drawn through a pair of points which are inverse with respect to a given circle is orthogonal to the given circle.

(i) A and B are the centres of two unequal and non-intersecting circles. HK is a direct common tangent. The circle whose diameter is HK cuts AB in X and Y. Prove that X and Y are inverse points with respect to each of the circles centres A and B.

Another circle, \( \Sigma \), passes through X and Y and cuts the circle with centre A at P and Q and the circle with centre B at R and S. PQ and RS cut at L. Prove that LX and LY are tangents to the circle \( \Sigma \).

(ii) Given a fixed circle, S, and two fixed points, P and Q, not on a diameter of S, state how to construct a circle orthogonal to S and passing through P and Q.
9. Two circles lying in different planes have two points \( P \) and \( Q \) in common. A point \( R \) is taken on one circle and a point \( S \) on the other. Assuming that one and only one sphere can be drawn through four points, prove that the sphere circumscribing \( PQRS \) contains every point on each of the circles. (8)

Two circles of equal radius, \( r \), lie in different planes and have a common chord which subtends an angle \( \theta \) (less than two right angles) at the centre of each circle. The major segments of the circles are inclined at the same angle \( \theta \). Prove that the radius of the sphere which contains the circles is

\[ r \sqrt{1 + \sin^2 \frac{\theta}{2}}. \]  

(12)
Before attempting to answer any question, candidates should read the whole of it very carefully, since time is often lost through misapprehension as to what is really required.

Candidates should, where necessary, illustrate their solutions by suitable diagrams.

Four-place mathematical tables are provided. Pages of square-ruled paper are included in the answer book.

In the answers to arithmetical examples, units must be stated.

Take $g = 32$.

Marks may be deducted for careless or badly arranged work.

The value attached to each question, or to each part of a question, is shown in the margin.
SECTION I

All the questions in this Section should be attempted.

1. (i) A ship is sailing at 10 knots due East and a boat is sailing at 6 knots in a direction 30° West of South. Find, in magnitude and direction, the velocity of the boat relative to the ship.

   (ii) A particle is projected from a point A vertically upwards with a velocity of 144 ft per sec. Two seconds later, from a point 16 ft directly underneath A, a second particle is projected vertically upwards with a velocity of 240 ft per sec. Find how far above A the two particles are when they meet, and determine their velocities at that instant.

2. A rigid framework is in the form of a trapezium ABCD with dimensions, in inches, as shown in the diagram. Forces act upon it as follows:

   - 3 lb.wt. along AB;
   - 15 lb.wt. along BC;
   - 2 lb.wt. along CD;
   - 5 lb.wt. along DA;
   - a couple of moment 60 lb.wt. in. acting in the sense ADCB.

   Find the magnitude of the resultant and show that the resultant acts along the diagonal BD.

   State briefly what would be the effect on the resultant if the couple were removed.
3. A train whose total weight is 250 tons is ascending an incline of 1 in 200 at a speed of 30 miles per hour. If the resistance due to friction etc. is 14 lb.wt. per ton, find the horse-power at which the locomotive is working.

If coaches at the rear of the train weighing 50 tons become uncoupled and the locomotive continues to work at the same rate as before, find the acceleration of the front part of the train just after the coupling breaks.

4. A mass of 8 lb starts from rest and moves in a horizontal straight line under the action of a variable force, \( F \) lb.wt., until the mass is again at rest. The value of \( F \) at the instant \( t \) seconds from the beginning of the motion is given by \( F = 3 - t^2 \).

Find the distance through which the mass moves.

Determine also the time which elapses from the beginning of the motion until the velocity reaches its maximum value, and find the work done by the force during this interval.

**SECTION II**

Only TWO questions should be attempted from this Section.

5. (i) A particle is moving with simple harmonic motion. If the maximum acceleration is 2 ft per sec per sec and the maximum velocity is 21 ft per sec, find the period of the motion.

\[(\text{Take } \pi = \frac{22}{7}).\]

For how long from an extreme position has the particle travelled at the instant when

(a) the acceleration first has a value half the maximum value;

(b) the velocity first has a value half the maximum value?

(ii) A car is travelling, without slipping, round a horizontal curve of radius 110 yd at a speed of 60 miles per hour. Find the minimum value of the coefficient of friction between the wheels and the road.

At what angle would the road require to be banked so that the car could travel round the curve at this speed without any sideways force being exerted by the wheels?
6. (i) Masses of 6 lb and 2 lb hang freely at the ends of a light inelastic string passing over a smooth pulley. Find the acceleration of the masses and the tension in the string.

The motion starts from rest and, after the lesser mass has risen 2 ft, it picks up an additional mass of 4 lb. Find the final velocity of the masses and the tension in the string. (12)

(ii) A mass $M$ moving due East with velocity $V$ collides with a mass $m$ moving due West with velocity $v$, the coefficient of restitution being $e$. If, after the collision, the mass $m$ remains at rest, express the ratio $m : M$ in terms of $e, V, v$. (8)

7. State necessary and sufficient conditions for the equilibrium of a number of coplanar forces acting on a rigid body. (2)

A uniform ladder rests in equilibrium at an angle $\alpha$ to the horizontal with one end on rough ground and the other against a rough vertical wall, the ladder being in a vertical plane. If the coefficients of friction at the lower and upper ends of the ladder are respectively $\mu_1$ and $\mu_2$, show that

$$\tan \alpha \geq \frac{1 - \mu_1 \mu_2}{2 \mu_1}.$$ (9)

If the wall is smooth and $\mu_1 = \frac{1}{4}$, and the ladder is at an angle $\beta$ to the horizontal such that $\tan \beta = \frac{4}{3}$, show that the ladder will slip unless supported, and that this support may be provided by placing a weight equal to twice that of the ladder at any point on the lower quarter of the length of the ladder. (9)

8. A uniform solid consists of the smaller part of a sphere of radius 4 in, which is cut off by a plane 2 in distant from the centre of the sphere. Show that the centre of gravity of this spherical cap is at a distance of 2.7 in from the centre of the sphere. (9)

A cylinder of the same material as the sphere and of radius equal to that of the circular face of the cap is firmly attached to the cap so that the circular faces coincide. The cylinder is of height 5 in and the composite solid is placed with its axis vertical and the curved surface of the cap on a horizontal surface.

Determine whether the solid is in stable or unstable equilibrium. (11)
1963

SCOTTISH CERTIFICATE OF EDUCATION

LATIN
Ordinary Grade

Friday, 3rd May—9.30 a.m. to 12 noon

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in brackets in the margin.

Candidates should attempt TWO sections, viz., section A, together with EITHER section B OR section C OR section D.

SECTION A

Candidates should attempt all the questions in this section

1. Write down:
   (a) the ablative singular of: bos, gravis, pulchrior.
   (b) the accusative plural of: vir, tempus, manus.
   (c) the superlative of malus and the positive of acerrime.

2. Write down:
   (a) the first person singular of the pluperfect indicative of: polliceor, gaudeo, eo.
   (b) the second person plural of the present indicative active of: prosum, facio, fero.
   (c) the nominative singular masculine of the present participle of: venire, conari.
3. Translate into Latin:—

(1) Do you wish to return to-day?
(2) He will send two slaves to guard their house.
(3) The soldiers would have fought more bravely if Caesar had been present.
(4) We hoped to see your sister three days ago.
(5) When this was announced I set out for Rome.

4. Translate into English:—

Mithridates, surreptitiously recovering one of the swords which he has previously buried in the conference area, kills Datames during a parley.

Mithridates certiorem facit Datamen tempus esse bellum contra regem gerere. probata re locum, quo conveniant, deligunt. hic Mithridates cum uno comite, cui maxime fidem habebat, paucis ante diebus venit, compluribusque locis separatim gladios obruit, eaque loca diligenter notat. ipso autem colloqui die utrique miserunt milites qui locum explorarent; deinde ipsi congressi sunt. hic cum aliquamdiu in colloquio fuissent, Mithridates, quasi defessus esset, ibi sedit ubi telum erat infossum. telum clam protulit atque veste texit. cum Datami digito demonstraret locum ad castra ponenda idoneum et ille respiceret, aversum ferro transfixit.

(1) aliquamdiu = for some time. (2) aversus = turned away.

5. (a) (i) Who was the Roman god of war?
   (ii) What modern English city corresponds to the town known to the Romans as Eboracum?
   (iii) Name the poet who wrote the Aeneid.
   (iv) Name a garment worn by Roman women.
   (v) Name the port of Rome.
   (vi) Place the following in chronological order, putting the earliest first:—
       Hannibal, Hadrian, Cicero.

(b) Write out in full the Latin form of the following everyday abbreviations:—
   p.m., etc., A.D., D.V.

(c) Write about 50 or 60 words on one of the following topics:—
   (i) Mark Antony.
   (ii) Gladiatorial Shows.
   (iii) The Romans in Scotland.
6. Translate into English:—

By throwing snakes in earthenware jars into the enemy ships Hannibal secures victory for Prusias over Eumenes. In the subsequent peace enforced by the Romans Hannibal kills himself.

Interim bellum inter Prusiam regem et Eumenem ortum est. Prusias, cum terrestri bello ab Eumene victus esset, proelium in mare transtulit; qua in navali pugna Hannibal callido consilio auctor victoriae fuit. nam omne serpentium genus in fictiles lagoenas coici iussit, medioque proelio in naves hostium misit. primo militibus Eumenis ridiculum visum est eos fictilibus pugnare, qui ferro pugnare non possent. sed ubi naves serpentibus repleri coeperunt, ancipiti periculo circumventae copiae Eumenis in fugam se dederunt. quae ubi Romam nuntiata sunt, legati a senatu missi sunt, qui utrumque regem in pacem cogerent, deditionemque Hannibalis deposcerent. sed Hannibal veneno sumpto legationem morte praevenit.

(1) anceps = twofold.  (2) praevenire = to forestall.

 SECTION C

Caesar, de Bello Gallico III, chapters 1–19.

Both questions should be attempted in this section

7. Translate into English:—

(a) Horum auctoritate finitimi adducti, ut sunt Gallorum subita et repentina consilia, eadem de causa Trebium Terrasidiumque retinent, et celeriter missis legatis per suos principes inter se coniurant, nihil nisi communi consilio acturos eundemque omnes fortunae exitum esse laturos; reliquasque civitates sollicitant, ut in ea libertate quam a maioribus acceperint permanere quam Romanorum servitutem perferre mallerent. omni ora maritima celeriter ad suam sententiam perducta, communem legationem ad P. Crassum mittunt; si velit suos recipere, obsides sibi remittat.

(b) Locus erat castrorum editus et paulatim ab imo acclivis circiter passus mille. hoc magno cursu contenduntur, ut quam minimum spati ad se colligendos armandosque Romanis daretur, examinatique pervenerunt. Sabinus suos hortatus cupientibus signum dat. impeditis hostibus propter ea quae ferebant onera, subito duabus portis eruptionem fieret. factum est opportunitate loci, hostium inscientia et defatigatione, virtute militum et superiorum pugnarum exercitatione, ut ne unum quidem nostrorum impetum ferrent ac statim terga verterent.
8. Answer briefly the questions set on the following passages, but do not translate the passages themselves.

(a) His nuntiis acceptis Galba . . . consilio celeriter convocato sententias exquirere coepit.

(1) Why did Galba take this step?
(2) What advice was given?
(3) What decision was finally taken?

(b) Itaque omni senatu necato reliquos sub corona vendidit.

(1) Which senate is referred to?
(2) Explain the phrase “sub corona vendidit”.

(c) . . . idoneum quendam hominem et callidum delegit, Gallum, ex eis quos auxilii causa secum habebat.

(1) Who chose the Gaul?
(2) To whom was he sent?
(3) What mission was entrusted to him?

SECTION D

Virgil Aeneid II, lines 250–558.

Both questions should be attempted in this section

9. Translate into English:—

(a) Dardanidae contra turres ac tota domorum culmina convellunt; his se, quando ultima cernunt, extrema iam in morte parant defendere telis; auratasque trabes, veterum decora alta parentum, devolvunt; alii strictis mucronibus imas obsedere fores; has servant agmine denso. instaurati animi regis succurrere tectis auxilioque levare viros vimque addere victis.

(b) cui Pyrrhus: “referes ergo haec et nuntius ibis Pelidae genitori; illi mea tristia facta degeneremque Neoptolemum narrare memento; nunc morere.” hoc dicens altaria ad ipsa trementem traxit et in multo lapsantem sanguine nati, implicuitque comam laeva, dextraque coruscum extulit ac lateri capulo tenus abdiditensem.
10. Answer briefly the questions set on the following passages, but do not translate the passages themselves.

(a) Invadunt urbem, somno vinoque sepultam.
   (1) Who is the subject of “invadunt”?
   (2) Why is the city “somno vinoque sepultam”?

(b) Et gener auxilium Priamo Phrygibusque ferebat, infelix, qui non sponsae praecipitae furentis audierit.
   (1) To whom does “gener” refer?
   (2) To whom does “sponsa” refer?
   (3) What is the significance of “furentis” as applied to this particular “sponsa”?

(c) Vadimus inmixti Danais haud numine nostro multaque per caecam congressi proelia noctem conserimus, multos Danaum dimittimus Orcus.
   (1) Who were the “Danai”?
   (2) What is the significance of the phrase “haud numine nostro”?
   (3) What was “Orcus”?
Begin the answer (or fair copy of an answer) to each question on a fresh page.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in brackets in the margin.

Translate into English:—

1. The oppressed allies have no one to turn to but the jury. They look, not for the restitution of their stolen property, but only for a verdict which will make life worth living.

Quo confugient socii? quem implorabunt? qua spe denique, ut vivere velint, tenebuntur, si vos eos deseretis? ad senatum venient, qui de Verre supplicium sumat? non est usitatum, non senatorium. ad populum Romanum confugient? facilis est causa populi. legem enim se sociorum causa iussisse et vos ei legi custodes ac vindices praeposuisse dicet. hic locus est igitur unus, quo perfugiant: hic portus, haec arx, haec ara sociorum: quo quidem nunc non ita confugiunt, ut ante in suis repetendis rebus solebant, non argentum, non aurum, non vestem, non mancipia\(^{(1)}\) repetunt, non ornamenta, quae ex urbis fanisque erepta sunt. metuunt homines imperiti ne iam haec populus Romanus concedat et iam fieri velit. patimur enim iam multos annos et silemus, cum videamus ad paucos homines omnes omnium nationum pecunias pervenisse. itaque socii res suas neglegunt, pecunias non repetunt; hoc iam ornatum\(^{(2)}\) ad vos confugiunt. aspicite, aspicite, iudices, squalorem sordesque sociorum!

\(^{(1)}\) mancipia = slaves. \(^{(2)}\) ornament = attire, dress.
2. **Pandarus closes the gate of the Trojan camp on the enemy but fails to notice that Turnus, the slayer of his brother, has forced his way in.**

Pandarus, ut fuso germanum corpore cernit, 
et quo sit fortuna loco, qui casus agat res, 
portam vi multa converso cardine torquet, 
obnixus latis umeris, multosque suorum 
moenibus exclusos duro in certamine linit;
ast alios secum includit recipitque ruentes, 
demens, qui Rutulum in medio non agmine regem 
viderit inrumpentem ultimoque incluserit urbi, 
immanem veluti pecora inter inertia tigrim.
continuo nova lux oculis effulsit et arma 
horrendum sonuere; tremunt in vertice cristae 
sanguineae, clipeaque micantia fulmina mittit.
agnoscunt faciem invisam atque immania membra 
turbati subito Aeneadae. tum Pandarus ingens 
emicat et mortis fraternae fervidus ira 
ffatur: “non haec dotalis regia Amatae: 
castra inimica vides; nulla hinc exire potestas.”

(1) cardo, -inis (m) = hinge.
(2) dotalis, -e = given as a dowry.

Scan the line beginning “immanem veluti” and the two following lines, marking the quantities and the feet only.

3. **The Romans, after compelling the inhabitants of Alba to leave their city, destroy it.**

Inter haec iam praemissi Albam erant equites, qui multitudinem traducerent 
Romanam. legiones deinde ductae ad diruendum urbem. quae ubi intravere 
portas, non quidem fuit tumultus ille nec pavor, qualis captarum esse urbium 
solet; sed silentium triste ac tacita maestitia ita defixit omnium animos, ut 
prae metu inscii quid relinquerent, quid secum ferrent, nunc in liminibus 
starent, nunc errabundi domos suas pervagarentur. ut vero iam equitum 
clamor exire iubentium instabat, iam fragor tectorum, quae dirueabantur, 
ultimis urbis partibus audiebatur, raptim, quibus quisque poterat, elatis, 
continens agmen migrantium implevit vias; vocesque etiam miserabiles 
exaudiebant, mulierum praecipue, cum obsessa ab armatis templae augusta 
praeterirent(1) ac velut captos relinquent deos. egressis urbe Albanis, 
Romanus passim publica privataque omnia tecta adequat solo, unaque hora 
quadringerentorum annorum opus excidio ac ruinis dedit.

(1) praeterire = to go past.
1. Translate into Latin:—

In this battle Antony’s army was decisively defeated, and he himself, having been declared an enemy of the state, was obliged to leave Italy. All those who had aided him in any way were sought out and punished; and his enemies were so enraged against him that they even wished to deprive his wife Fulvia of all her possessions and to put his children to death. Although Atticus was very friendly with Cicero, the leader of the senatorial party\(^1\), he did everything that he could to help Antony’s family and friends; for he thought that he ought to show himself mindful of the benefits which he had previously received from Antony. When Antony returned in triumph to Italy, Atticus, fearing that he might be proscribed\(^2\) because of his friendship with Cicero, fled and lay hidden at a friend’s house. Antony, however, after inquiring where Atticus was, wrote telling him not to be afraid and to come to him at once.

\(^{1}\) senatorial party = optimates, -ium.
\(^{2}\) proscribe = proscribere.

2. Translate into Latin:—

(1) Let us resist the Gauls with all our might if they attack the citadel.
(2) No one doubted that he had gone away before he could be accused of treason.
(3) We all hoped that the pirates would be prevented from entering the harbour.
(4) Many people believe that he adopted this plan in order to escape more easily.
(5) However great the storm, the ships must set sail before sunset.
(6) He will be willing to remain here, provided you give him enough money.

3. (TURN OVER)
3. (a) Give the nominative singular masculine of the perfect participle passive of:— infero, cognosco, reperio, vincio, augeo, emo. (3)

(b) Give the genitive singular of: Iuppiter, merces, and the dative plural of: vulnus, vis. (2)

(c) Give the Latin for:—
   with all speed; contrary to expectation; every third man; on the 13th of April. (2)
G R E E K

Ordinary Grade

Friday, 17th May—9.30 a.m. to 12 noon

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in brackets in the margin.

Candidates should attempt TWO sections, viz., section A, together with EITHER section B OR section C.

SECTION A

Candidates should attempt all the questions in this section

1. Write down:

(a) the dative singular of:—Σωκράτης, βασιλεύς, σώφρων.
(b) the genitive singular of:—γόνυ, ποῦς, ἀνήρ.
(c) the comparative of:—εὖ, ἤδεως.
(d) the second person singular of the present imperative of:—
mάχομαι, φεύγω, οἶδα
(e) the nominative singular masculine of the aorist participle active of:—
τιμῶ, νομίζω, διαφθείρω.
(f) the Greek for:—to-day, on the seventh day.

2. Translate into Greek:

(1) I asked him whether this was true or not.
(2) We shall always try to help our friends.
(3) They despaired because the entire Athenian army had been destroyed.
(4) The house is so big that we suffer terribly in winter.
(5) The generals will quickly perceive that the enemy are very powerful.
3. Translate into English:—

The young Cyrus goes hunting.

Επεί δ' οὖν ἐγνω ὁ Ἀστυάγης σφόδρα Κύρον ἐπιθυμοῦντα ἔξω θηραίν, ἐκπέμπει αὐτὸν καὶ φύλακας συμπέμπει ἐφ' ὕππων προσβατέρους, ὡς φυλάττοιες αὐτὸν. οὖν Κύρος προθύμως ἐπινιγάμενο ποιός οὐ χρὴ πελάζεων(1) θηρίοις. ὥσ ὅ ἐδείξαν ἑλαφόν(2) ἐκπηδήσατον, πάντων ἐπιπλαθόμενοι δι' ἣκουσέν ἐδίωκεν. καὶ πῶς ὁ ὕππος πίπτει εἰς γόνατα καὶ ὅσον οὐκ ἐκεῖνον ἐκτραχήλισεν(3) ἀλλ' ἐπέμενεν ὁ Κύρος μόλις ποιός, καὶ ὁ ὕππος ἐξανέστη. ὅσ ὅ ἐε ο ὤν πεδίον ἦλθεν, ἀκοντίσας καταβάλλει τὴν ἑλαφόν, καλὸν τι χρῆμα καὶ μέγα. καὶ ὁ μὲν δὴ ἔχαιρεν· οἵ ὅ φυλάκες ἐμέμφοτο αὐτῷ, καὶ ἔλεγον εἰς οἷον κύδυνον ἐλθοῦ.

(1) πελάζεων = to come near.  
(2) ἑλαφός = a hind.  
(3) ἐκτραχήλισεν = to throw over one's head.

4. (a) (i) Name the Greek goddess of wisdom.
(ii) Name the peninsula of which Sparta was a part.
(iii) Name the dog who guarded the entrance to the Underworld.
(iv) Give the Greek word for the public assembly of the Athenians.
(v) Name a Greek writer of comedy.
(vi) Place the following in chronological order, putting the earliest first:—

Demosthenes, Solon, Pericles.

(b) Give one English word derived from each of the following:—

ὑπνος, γῆ, φίλος, ἀγγέλλεως.

(c) Write about fifty or sixty words on one of the following topics:—

(i) Achilles.
(ii) Athenian Education.
(iii) Themistocles.
SECTION B

Unprepared Translation

5. Translate into English:—

Thebe, with the help of her brothers, kills her cruel husband.

‘H ðe Θήβη, μισοῦσα τὴν ὁμότητα τοῦ ἀνδρός, ἐπεβούλησεν αὐτῷ μετὰ τῶν ἀδελφῶν, τριῶν ὄντων, καὶ τὴν μὲν ἄλλην οἰκίαν τὴν τοῦ τυράννου κατείχον αὐτικαί· ὃ δὲ θάλαμος ἐν ὧ καθεῦδεν εἰσῆθαις ὑπερδῶς(1) ἦν, καὶ πρὸ αὐτοῦ φυλακὴν ἐίχεν κύων δεδεμένος, παῖ δοκείτω πλὴν αὐτοῖς καὶ έν τῶν οἰκετῶν τῷ τρέφοντι. ἐπεὶ δ’ οὖν ἔμελλεν ἡ Θήβη τὸν ἄνδρα ἀποκτείναι, τοὺς ἀδελφοὺς πάσαν τὴν ἡμέραν ἐν οἶκῳ τοις ἐκρυβίστεν νυκτὸς δὲ τὸν μὲν οἰκέτην ἐκέλευσεν ἀπάγειν ἑξῆ τοῦ κύνα. αὐτὴ δὲ εἰσῆλθεν εἰς τὸν θάλαμον καὶ, καθεῖλοσα τὸ ἔξοδον υπέρ τῆς τοῦ τυράννου κεφαλῆς κρεμάμενον,(2) οὕτως ἐδείξε τοῖς ἀδελφοῖς τὸν ἄνδρα καθεῦδοντα. οἱ δὲ εὐθὺς αὐτὸν ἀπέκτειναν.

(1) ὑπερδῶς = situated in the upper part of the house.
(2) κρεμάμενος = suspended.

SECTION C

Xenophon, Anabasis IV, chapters 3–5

Both questions should be attempted in this section

6. Translate into English:—

(a) ἐνετείθην ἐπεμψαν νυκτὸς Δημοκράτην Τημώτην ἄνδρας δόντες ἐπὶ τὰ ὄρη ἔνθα ἐφασαν οἱ ἀποσκεδασμένοι καθοραί τὰ πυρὰ· οὕτως γὰρ εἶδοκει καὶ πρότερον πολλὰ ἦδη ἀληθεύοσα τοιαῦτα, τὰ δὲ τὸς ὄντα καὶ τῷ μῆ ὄντα ὡς οὐκ ὄντα. πορευθέντα δὲ τὰ μὲν πυρά οὐκ ἔφη ἰδεῖν, ἄνδρα δὲ συλλαβόν ἦκεν ἄγουν ἔχοντα τόξον Περσικὸν καὶ φαρέτραν καὶ σάγαρον οἰάντερ καὶ Ἀμαζόνες ἔχουσαν. ἐρωτώμενος δὲ ποδαπὸς εἰς Πέρσης μὲν ἔφη εἶναι, πορεύεσθαι δὲ ἀπὸ τοῦ Τιμβάζου στρατοπέδου, ὅπου ἐπιτήδεια λάβοι.

(b) ἐλείποντο δὲ τῶν στρατιωτῶν οἱ τε διεθναρμένοι ὑπὸ τῆς χώνος τοὺς ὕφθαλμοὺς τε τοῦ ὑπὸ τῶν ψυχῶν τοὺς δακτύλους τῶν ποδῶν ἀποσεσπέστες. ὡς δὲ τοῖς μὲν ὕφθαλμοῖς ἐπικούριμα τῆς χώνος εἰ τις μέλαν τι ἔχων πρὸ τῶν ὕφθαλμῶν ἐπορεύετο, τῶν δὲ ποδῶν εἰ τις κυνότοι καὶ μιμητὰ σῆμα ἔχοι καὶ εἰς τὴν νύκτα ὑπολύοιτο· οὕσει δὲ ὑποδεδεμένου ἐκομίστο, εἰσεδύοντες εἰς τοὺς πόδας οἱ ἰμάντες καὶ τὰ ὑποδήματα περιεπήγηντο· καὶ γὰρ ἤκουσαν, ἐπειδὴ ἐπέλυπτε τὰ ἀρχαία ὑποδήματα, καρβάτων πεποιημέναι ἐκ τῶν νεοδάρτων βοῶν.

7. [TURN OVER]
Answer briefly the questions set on the following passages, but do not translate the passages themselves.

(a) ἐδοξέεν ἐν πέδαις δεδέσθαι, αὕται δὲ αὐτόμαται περιμένηαι, ὥστε λυθῆναι καὶ διαβαίνειν ὅποσον ἐβούλετο.
   (i) What is Xenophon describing here?
   (ii) When did the incident occur?
   (iii) Why did it give him pleasure?

(b) προπέμψας ἐμπνεύσα εἰπεν ὧτι βουλοῦτο διαλειψθῆναι τοῖς ἀρχοῦσιν.
   (i) Who was the subject of “εἰπεν” and what was his official position?
   (ii) What proposals did he put forward?

(c) ὁ δὲ ταῦτα ὑπισχεῖτο, καὶ φιλοφρονούμενος οἶνον ἐφφασεν ἐνθα ἦν κατορωμυμένος.
   (i) Who made the promise?
   (ii) What did he promise to do?
   (iii) How had he been persuaded to make the promise?
Translate into English:—

1. Alcibiades returns from exile to Athens and is made supreme commander.

'Αλκιβιάδης δὲ, ἐπεὶ τὴν πόλιν ἑώρα ἑαυτῷ εὐνόην οὖν, κατέπλευσεν εἰς τὸν Πειραιᾶ. καταπλέοντος δ' αὐτοῦ ὃ τε ἐκ τοῦ Πειραιῶς καὶ ὃ ἐκ τοῦ ἀστεως ὁχλὸς ἡμρολόθη πρὸς τὰς ναῦς, θαυμάζοντες καὶ ἱδεῖν βουλόμενοι τὸν Ἀλκιβιάδην, λέγοντες οἱ μὲν ὡς κράτιστος εἰ ὑπὸ τῶν πολιτῶν καὶ μόνος οὐ δικαίως φύγοι, οἱ δὲ ὅτι τῶν παροικομένων αὐτοῖς κακῶν μόνος αὐτίος εἰη. Ἀλκιβιάδης δὲ πρὸς τὴν γῆν ὅρμωσεις ἀπέβαινε μὲν οὖν εὐθὺς, φοβούμενος τοὺς ἐχθροὺς· ἐπαναστάσει δὲ ἔπι τοῦ καταστρώματος ἐσκόπει τοὺς αὐτοῦ ἐπιτηδείους, εἰ παρεῖχαν. κατιδῶν δὲ Εὐρυπόλεμον τὸν Πεισάνακτος, αὐτοῦ δὲ ἀνεψιόν, τοὺς ἀλλοὺς οἰκείους καὶ τοὺς φίλους, τότε ἀποβαίνει εἰς τὴν πόλιν μετὰ τῶν παρεσκευασμένων, εἰ τὸς ἀπτομο, μὴ ἐπιτρέπεων. ἐν δὲ τῇ βουλῇ καὶ τῇ ἐκκλησίᾳ ἀπολογησάμενος ὡς οὖν ἤσεθηκε, εἰπὼν δὲ ὡς ἠδίκηται, λεχθέντων δὲ καὶ ἄλλων τοιούτων καὶ οὐδενὸς ἀντεπόντως διὰ τὸ μὴ ἀνασχέσθαι ἀν τὴν ἐκκλησίαν, ἀνερήθη ἀπάντων ἤγεμον αὐτοκράτωρ.

(1) ἀνεψιός = cousin.
2. If the jury acquit Agoratus, they will condone the murder of those who were his victims during the oligarchical reign of terror.

προσήκει δ’ ύμων, ὃ ἄνδρες δικασταί, ἀπασι τοῦτον τιμωρεῖν ὑπὲρ ἑκείνων τῶν ἀνδρῶν ὁμοίως ὥσπερ ἴμων ἐλ ἐκάστῳ. ἀποθνησκοντες γὰρ ἐπέσκηψαν(1) καὶ ἴμων καὶ τοῖς φίλοις ἀπασι τιμωρεῖν ὑπὲρ σφῶν αὐτῶν Ἄγορατον τουτοί, ὡς φονέα ὑπα, καὶ κακῶς ποιεῖν, καθ’ ὅσον ἄν βραχυ ἐκαστος δύνηται. εἰ τοῖς τι ἑκείνοι ἀγαθὸν τὴν πόλιν φανεροὶ εἰσὶ πεποιηκότες, ὃ καὶ αὐτὸ ὄμεις ὁμολογεῖς, ἀνάγκη ὕμας ἐστι πάντας ἑκείνοις φίλους εἶναι. οὐκομ οὔτε ὅσον οὔτε νόμομον ὕμων ἐστὶν ἀνείναι Ἄγορατον τουτοί. ὑμεῖς τοῖς, ὃ ἄνδρες Ἀθηναῖοι, νυνὶ δὴ, ἐπεί ἐν τῷ τότε χρόνῳ, ἐν ὃ ἑκείνοι ἀπέθνησκον, οὐχ οἷοί τε ἑκείνοις ἐπαρκέσαι(2) ἦστε διὰ τὰ πράγματα τὰ περιεστηκότα, νυνὶ, ἐν ὃ δύνασθε, τιμωρήσατε τὸν ἑκείνων φονέα. ἐνθυμεῖσθε δ’, ὃ ἄνδρες Ἀθηναῖοι, ὅπως μὴ πάντων ἔργον σχετικῶταν ἐργασθήσετε. εἰ γὰρ ἀποθνησκοῖ, Ἀγοράτου τουτούτῳ, οὐ μόνον τοῦτο διαπράττεσθε, ἀλλὰ καὶ ἑκείνων τῶν ἄνδρῶν, οὐς ὁμολογεῖτε ὑμῖν εὔνους εἶναι, τῇ αὐτῇ ψήφῳ ταύτῃ θάνατον καταψηφίζεσθε. ἀπολύσοντες γὰρ τὸν αὐτὸν ὄντα ἑκείνοις τοῦ βανάτου, οὐδὲν ἄλλο γιγνώσκετε ἢ ἑκείνους δικαίους ὑπὸ τοῦτον τεθνηκέναι.

(1) ἐπισκῆπτεῖν with dative = to command.
(2) ἐπαρκεῖν with dative = to assist.
3. Either (a) or (b).

(a) Athene, in disguise, conducts Odysseus to the palace of the Phaeacian king.

T' on ð' aúte prōsēēπει thea γλανηκόπτις Ἀθήνη; 
"τοίγαρ ἐγὼ τοί, ἔευνε πάτερ, δόμον ὁν με κελεύεις
δεῖξω, ἐπεὶ μοι πατρός ἀμύμονος ἐγγύθι ναίει.

αλλ' ἰδι σιγὴ τοίν—ἐγὼ δ' ὀδὸν ἰγκεμοεύσω—
mηδ' τιν' ἀνθρώπων προτιόσσεο(1) μηδ' ἐρέευε.

οὐ γὰρ ξείνους οἰδε μᾶλ' ἀνθρώπους ἀνέχονται
οὐδ' ἀγαπαξόμενοι φιλέουσ', ὦς κ' ἀλλοθεν ἐλθῆ.

νησίθ θοῆω τοί γε πεποιθότες ἀκείμην
λαύτμα(2) μέγ' ἐκπερόσων, ἐπεὶ σφισι δῶκ' ἐνοσίχθων.

τῶν νέες ἀκείαι ὡς εἰ πτερόν ἦ νόημα."

ὡς ἄρα φωνήσας' ἡγήσατο Πᾶλλας Ἀθήνη
καρπαλίμως: δ' δ' ἐπείτα μετ' ἵχνια βαίνε θεοί.

τὸν ὅ' ἄρα Φαίθηκες ναυοκλυτοί οὐκ ἐνόησαν
ἔρχομενον κατὰ ἄστυ διὰ σφέας: οὐ γὰρ Ἀθήνη
ἐξα ἐὐπλόκαμος, δεινὴ θεός, ἡ ἧ ὅ ἀχ λύο(3)

θεοπεσίν κατέχενε φίλα φρονέουσ' ἐν θυμῷ.

(1) προτιόσσομαι = I look upon.
(2) λαύτμα = depth, gulf.
(3) ἀχ λύο = mist.

Scan the line beginning μηδε τιν' ἀνθρώπων and the two following lines, marking the quantities and the feet only.

(b) [TURN OVER]

Page three
(b) A merchant relates how a captured Trojan seer has prophesied to the Greeks that Troy will not fall unless Philoctetes is brought back.

EMΠΟΡΟΣ. 'Εγώ σε τούτ', ἵως γὰρ οὐκ ἀκήκοας, πάντως ἢν τις εὐγενής, Πριὰμου μὲν υἱός, ὄνομα δ' ἀνωμάζετο Ἐλενος, δὲν οὖτος νυκτὸς ἕξελθὼν μόνος, δόλιος Ὀδυσσεύς, εἶλε δεσμὸν τ' ἄγων ἐδειξ' Ἀχαιοῖς ἐς μέσον, θῆραν καλὴν. ὅς δὴ τά τ' ἄλλ' αὐτοῖοι πάντ' ἐθέσπισεν καὶ τάπι Τροίᾳ πέργαι' ὡς οὐ μὴ ποτὲ πέρσοιεν, εἰ μὴ τόνδε πείσαντες λόγῳ ἀγοιντο νήσου τῆσδ' ἐφ' ἣς ναίει ταῦτα. καὶ ταῦθ' ὅπως ἥκουσι' ὁ Δαέρτου τόκος τὸν μάντων εἰπόντ', εὐθέως ύπέσχετο τὸν ἀνδρ' Ἀχαιοῖς τόνδε δηλώσεων ἄγων. ἥκουσας, ὃ παῖ, πάντα: τὸ σπείρειν δὲ σοι καῦτῳ παρανῷ κεὶ τινος κήδει(1) πέρι. οὐμοὶ τάλας. ἦ κεῖνος, ἦ πάσα βλάβη, ἐμ' εἰς Ἀχαιοὺς ομοσσεν πείσας στελεῖν;

(1) κήδεσθαι = to be concerned, anxious.

Scan the line beginning ὅς δὴ τά τ' ἄλλ' and the two following lines, marking the quantities and the feet only.
1. Translate into Greek:—

The Athenians, therefore, sent Alcibiades to Sicily as commander of the fleet and army along with two others. While he was in Sicily, the Athenian soldiers won many victories, but his enemies at home, fearing that he might become too powerful, decided to accuse him of treason. A messenger was sent to Sicily to order him to return home; but when the ship in which he was travelling reached the mainland, he fled secretly from his guards and went to Thebes. Hearing that he had been condemned in his absence by the Athenians, he crossed over into Lacedaemon. From this country he waged war against his personal enemies, who, he said, were truly the foes of his native land: for, perceiving that he was able to do the city much good, they had taken care that he should be exiled. On his advice, the Lacedaemonians made friends with the Persian king; then they fortified a place in Attica, and by maintaining a guard continuously there, kept Athens under siege.
2. Translate into Greek:

(1) May the citizens never be so foolish as to allow him to leave Athens!
(2) We do not know whether the city would have been saved if the allies had come more quickly.
(3) Although you have not many soldiers ready, you ought to help these men at once.
(4) I could not prevent the boys from running out of the house whenever they saw ships approaching.
(5) Did the general not promise to make a truce on condition that the Persians gave back the prisoners?

3. (a) Give the nominative singular masculine of the aorist participle passive of:

\( \varepsilon\nu\rho\iota\sigma\kappa\omega ; \beta\alpha\lambda\lambda\omega ; \delta\eta\lambda\omega ; \dot{\alpha}\gamma\omega ; \dot{\alpha}\gamma\gamma\epsilon\lambda\lambda\omega ; \tau\rho\epsilon\pi\omega. \)

(b) Give the genitive singular of:

\( \upsilon\delta\omega ; \varepsilon\upsilon\gamma\epsilon\nu\eta\varsigma ; \lambda\iota\mu\iota\nu ; \nu\epsilon\alpha\nu\iota\varsigma. \)

(c) Give the Greek for:

for four days; in addition to this; the men of old; to feel grateful.
HEBREW

Ordinary Grade

Monday, 6th May—9.30 a.m. to 12 noon

Begin the answer (or fair copy of an answer) to each question on a fresh page.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

Answers in Hebrew must be written in the square character.

The value attached to each question is shown in the margin.
1. Translate into English any two of the following passages (a), (b) and (c).

(a) (II Samuel xix, 12-16)

Page two
(Psalm cxlviii, 1–7)

(20)
2. Parse the words underlined in the two passages you have translated.

3. Translate into pointed Biblical Hebrew:

(a) Come and let us return to our God that we may fear him all the days of our life.

(b) And they took their wives and children and went out of the land where they had been slaves.

(c) I will lift up my eyes to the hills where the God of our fathers appeared to them in the days of old.

(d) And Abraham went up to the mountains of that land to offer up a sacrifice to his God.

4. Point and translate into English:

(a) ועשׂנְךָ אלֵהַי יִשָּׂרָאэל וְאֵת בָּנָי אֱלֹהֵיכָּם יִשָּׂרָאэלִים לִהְיוּ

(b) לא נקח את האיש ואת אשתו ואת בנו ואת הבנו וּלְתָם מֻּדְעֵר

(c) כיָם הנשב נשבע אל ארץ מצילה ואל בית אבִינו

(d) ויהי בְּשָׁבְעוֹ הנשב נשבע שמְשָׁלֵם כל יָמִי חֲדֵי
Begin the answer (or fair copy of an answer) to each question on a fresh page.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

Answers in Hebrew must be written in the square character.

The value attached to each question, or to each part of a question, is shown in the margin.
1. Translate into idiomatic English any **two** of the following passages (a), (b) and (c).

(a)

I Samuel viii, 6-10.

(29)
Page three
ولدָה בְּשַׁנָּה 1860 בֶּנְדוֹפְּפֶּשׁ, בַּכְּרוֹבָּה בְּזִירֵבָנְסֵה.

חרָבָה שֶל אָחוֹת בְּתִירֵבָנְסֵה הָאָשְׁרֵי יְחָצָא לְפַלָּי זְמוֹן קַעַר, שְׁאוֹנָה רוֹשׁ לַחַזֶּה.

לַחַזֶּה יוֹחֵר בַּכְּרוֹבָּה הָוָּשִׁמ, מָאָשָּׁר יְי לְחַמְנֶהוּ.

בְּכַהְתָּה הָרוֹאָשְׁתָּה, בְּכוּתָהּּ הָדוּרֵי, וְזֶה הָדוּרֵי אָלַי, פָּוָּב, כְּאָבָּי

זֶה סְוַּרֶדֶר, רֵין גַּנֶּה בַּכְּרוֹבָּהּ מְנָצְּרוּן קֶבֶלָה מְנוּבָה.

מַפֶּל שֶלּוּ יְדוֹתֵר פְּרַשְׁוֹן אָחוֹדָה, עַל צִירָת הָדוּרֵי מְנָצְּרוּן.

רַוְיָמִי מְנָצְּרוּן רַבָּהּ לַחַזֶּה מְנוּבָה, עַל שֶלֶּון בַּכְּרוֹב אָחָה מְנָצְּרוּן מְנָצְּרוּן.

בַּכְּרַנְיָה נְבַנְסַת לַבּי-רְפֵּאָה, שֶבָּל לְפַלָּה יְוּתֵר מְכַפְּלוּת הָדוּרֵי.

שַׁמָּוַת בֵּילְמִוְיָה לֹא נְמָשְּכָה הָרוּבָּהּ, כְּבִּת הָטַּפְּרֵי הָרֵי-אָלַי הָדוּרֵי.

אָמְרֵם שֶלֶּיחְקֵי יְהוּדָה, אַחָר מִן הָדוּרֵי אָמְרֵם: 'אָנָשָּׁה בֵּילְמִוְיָה, שֶבָּל לְפַלָּה הָדוּרֵי.

מְשַׁלְפָּלֵי, יְהוּדָה יְהוּדָה, אַחָר הָטַּפְּרֵי מְשַׁלְפָּלֵי, וָלֵא רַצִּיוּ לָהָמָשְּכָ, בֵּילְמִוְיָה.

בְּכוּתָהּּ הָדוּרֵי, וָלֵא רַצִּיוּ לָהָמָשְּכָ.
2. Point and translate:

(a) וְיָרָה יְהֹוָה אֶת נָבֹאָה צְלֹה יָדֹר עַל הַאֲרוֹכָּהָו וּכְבִּינָהוּ וּכְבִּיתָהוּ:

(b) וְרָשׁ בַּיָּשֶׁר הָאָלָלָוּ וּבָשׁ הָאָלָלָוּ רְבָּעֲוֹ נַחֲלָוּ וּאֵשׁ הָאָלָלָוּ אֶל נַחֲלָוּ.

(c) נְעַלְׁהֶת אַתָּה וְכָל אֲשֶׁר אֶתְּנָה נְאָרָה לְפָנֶיךָ אֶלְבָּדָג.

(d) וְיִהְיֶה בָּכָלָהָוּ לְעָלָלָוּ עַשָּׁה וּנְאָרָה הָנִבָּיָּהָוּ בְּאָרָה שֶרֶשׁ הָנִבָּיָּהָוּ לְכָלָהָוּ.

3. Write:

(a) the 3rd plural masculine imperfect Qal of

רָאתָ יְהוָה עַבְרַה עַבְרַה עַבְרַה

(b) the 3rd singular masculine perfect and imperfect, singular masculine imperative, infinitive construct, and singular masculine participle of

the Hiphil of יִשָּׁה

the Hophal of מָה

the Niphal of יִשָּׁה

the Piel of נָהוּ

(c) [TURN OVER]
(c) the construct plural of

4. Note briefly the various uses of the Niphal in Hebrew.
1. Render into idiomatic Classical Hebrew:

When trouble comes upon his people, it is not right for a man to say, “I will eat and drink, and things will be well with me”. Moses our Teacher always bore his share in the troubles of the community, as it is written, “They took a stone and put it under him”. Could they not have given him something soft to sit on? But he said, “Since the Israelites are in trouble, I will bear my part with them, for he who bears his portion of the burden will live to enjoy the hour of consolation”. Woe to one who thinks, “Ah, well, I will neglect my duty. Who can know whether I bear my part or not?” But even the stones of the house and the trees of the field shall testify against him, for it is written, “For the stones will cry from the wall and the trees will bear witness”.

2. Render into idiomatic Classical Hebrew:

(a) It is better for us to put one another to death than to surrender to our enemies.

(b) Tell me again the story of our fathers’ exodus from the land of bondage and of the salvation of our God.

(c) Though his father was angry with David and would have killed him Jonathan was loyal to his friend.

(d) We must not only deal justly but be seen to deal justly that all men may ascribe glory to the God of our fathers.

Marks

1. 60 marks

2. 20 marks
SCOTTISH CERTIFICATE OF EDUCATION

FRENCH

Ordinary Grade—(First Paper(a))

AURAL COMPREHENSION TEST

Wednesday, 8th May—9.15 a.m. to 9.45 a.m.

This paper must not be seen by any candidate

INSTRUCTIONS TO THE TEACHER

1. Use the ten minutes preceding the beginning of the examination to make yourself thoroughly familiar with the passage to be read.

2. When so instructed by the Invigilator, read to the candidates the "Instructions to Candidates" given below.

3. Then read the passage aloud to the candidates, speaking clearly and naturally, and taking not more than four minutes to the reading.

4. After this reading inform the candidates that they will have three minutes in which to study the questions. You yourself will not be allowed to see the questions which are to be answered by the candidates.

5. When so instructed by the Invigilator, read the passage a second time, in exactly the same manner as on the first occasion and taking the same amount of time.

6. After the second reading you should leave the examination room.
INSTRUCTIONS TO CANDIDATES

1. Listen carefully to the following passage with a view to answering questions on its content.

2. The questions are to be answered in English.

3. The passage will be read twice, with an interval of three minutes between the readings.

4. No writing should be done while the passage is being read.

5. You may not ask for the repetition of any word or phrase.

Passage to be read to the candidates (maximum time of reading—four minutes).

C'était pendant l'hiver. Je gardais les moutons à la place de ma soeur qui aidait ma mère à la maison. Un soir, où il faisait un temps affreux, et où on ne voyait rien à cause de la pluie, du vent, et de la nuit qui était venue à trois heures, je ramenais mes moutons. Mais il me semblait qu'il en manquait un. Du reste l'air inquiet de mon chien qui tournait autour du troupeau, puis me jetait un regard plein de reproche, me le disait très clairement.

Mais ce soir-là, je manquais de courage. J'étais gelé et j'avais grand'faim. Il me semblait qu'une fois dans la cuisine, au chaud, tout s'arrangerait et que le mouton finirait par se retrouver. En rentrant, je ne dis rien et je mangeai mon souper en silence. Mais ma conscience ne me laissa pas tranquille, et la soirée me sembla interminable. Enfin l'heure de se coucher arriva, mais je ne pouvais pas dormir.

J'avais mon lit en haut à côté du grenier. Ma soeur Françoise couchait dans l'alcôve de la cuisine avec ma grand'mère. Au milieu de la nuit, je ne sais pas quelle heure il était, je ne pouvais plus rester au lit. Je me levai et m'habillai. Puis j'allai réveiller ma soeur. “Françoise, lui dis-je doucement à l'oreille, il y a un mouton perdu.” “Oh bien, me dit-elle tout bas, il faut essayer de le retrouver avant le jour.” Elle se leva tout de suite, et nous nous mimes en route pour le pâturage, accompagné du chien. Arrivés au pâturage nous cherchâmes à droite et à gauche, mais nous ne trouvâmes rien.

Tout à coup Françoise me dit: “Tu as gardé les moutons près de la chaumière du vieux berger, n'est-ce pas? Sans doute il a trouvé l'animal et l'a mis dans son étalé. Nous irons le lui demander.” Et en effet, nous trouvâmes là notre mouton perdu. Il commençait à faire jour quand nous arrivâmes chez nous. Le mouton bêlait faiblement dans mes bras, et le chien bondissait, disant sa joie.
1963

SCOTTISH CERTIFICATE OF EDUCATION

FRENCH

Ordinary Grade—(First Paper (a))

AURAL COMPREHENSION TEST

Wednesday, 8th May—9.15 a.m. to 9.45 a.m.

Answers are to be written on the sheet provided for the purpose, on which are also to be written any notes made between the readings.

QUESTIONS

Answer in English the following questions on the passage read to you.

(1) Why was the boy looking after the sheep that day? What season of the year was it and what made his job unpleasant and difficult?

(2) Why was the boy uneasy on his way home, and in what ways did the dog’s behaviour increase his uneasiness?

(3) For what reasons did he decide to take no action? What effects did this decision have on him during the evening?

(4) Why did he awaken his sister and what did she say? What action did they then take and with what success?

(5) What thought suddenly occurred to the sister and what was the result? Describe their homecoming.

(15)
1963
SCOTTISH CERTIFICATE OF EDUCATION

FRENCH

Ordinary Grade—(First Paper (b))

Wednesday, 8th May—10.0 a.m. to 11.30 a.m.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read. The value attached to each question is shown in the margin.
1. Read carefully the passage given below, then answer in English the questions which follow it.

Depuis dix ans on ne l’avait pas revue, la petite rivière. Une nuit elle avait disparu comme par enchantement et dans son lit à sec les jardiniers cultivaient des légumes. Les habitants de Léonville voyaient dans cet événement extraordinaire quelque chose de profondément humiliant; en quelque sorte comme une tache sur l’honneur de la ville.

Les vieilles gens en parlant de la petite rivière évoquaient des souvenirs d’enfance, racontant les baignades d’autrefois, les extraordinaires aventures de pêche et d’inondations. Monsieur le Maire, qui était un savant, expliquait que la rivière existait toujours, qu’elle avait pris un cours souterrain et coulait probablement dans de sombres et mystérieuses cavernes. Mais on n’espérait pas la revoir.

Cependant, un jour de juin le vieux Clément qui travaillait dans son jardin dans le lit asséché de la rivière fut bien surpris en retirant sa bêche de voir le trou qu’il avait creusé se remplir d’eau. Il continua de creuser—plus de doute! L’eau de la rivière revenait. Sans perdre une minute il courut chez Monsieur le Maire pour lui faire part de sa grande découverte. La nouvelle se propagea comme un éclair et les gens de la ville se pressèrent en foule pour voir le miracle. Les uns étaient incrédules, les autres, les vieux surtout, pleins de foi dans leur vieille rivière, mettaient leurs habits de dimanche comme au retour d’un vieil ami.

Les enfants sautaient de joie et ayant trouvé un vieux drapeau, ils faisaient cortège en criant:

— La rivière est revenue!

La foule applaudissait, les vieux en avaient des larmes aux yeux, et Monsieur le Maire fit un petit discours approprié.

L’enthousiasme, d’ailleurs, ne baissa pas; le lendemain un groupe de propriétaires se forma pour protéger la rivière, une société de pêcheurs à la ligne se reconstitua, et on fit préparer une plaque commémorative. L’honneur de la ville était rétabli; toute une nouvelle vie allait commencer.

QUESTIONS

(1) What strange event had taken place ten years before and how did it affect the inhabitants of Léonville?

(2) What memories were aroused in the old people when they spoke of their river?

(3) What did the mayor say about the river?

(4) Where was old Clément working one day in June?
   What was he doing and what happened to surprise him?

(5) (a) What did Clément do then and with what result?
    (b) How did the townspeople react to his story?

(6) Describe how the various people showed their emotion.

(7) What happened next day which showed that the feelings of the townspeople were not merely a passing phase?
2. Translate into English:

Pour les vacances de Pâques le château s’ouvrait et Arnaud revint, accompagné de ses parents. Dès son arrivée il se précipita vers notre maison où, du pas de la porte, j’observais tout ce qui se passait.


Arnaud était mon cadet de quelques mois, mais il était aussi grand que moi et bien plus hardi. A Paris il avait sans doute des centaines de camarades, mais ne sachant pas s’amuser seul, il était bien content de me retrouver ici.

Ses paroles amicales me firent beaucoup de plaisir. Je croyais qu’il m’avait oublié après six mois d’absence. Il avait promis de m’écrire en me quittant, mais il n’avait pas tenu sa promesse. Il n’avait même pas répondu à la carte traditionnelle que je lui avais envoyée au jour de l’an. Et pourtant il se souvenait de moi.

Pendant les semaines suivantes nous ne nous quittions plus. Tous les jours il m’entraînait chez lui au château, et peu à peu à son contact je devenais gai et bavard.
SCOTTISH CERTIFICATE OF EDUCATION

FRENCH

Ordinary Grade—(Second Paper)

Wednesday, 8th May—2.15 p.m. to 3.45 p.m.

Marks may be deducted for writing that is difficult to read.
The value attached to each question is shown in the margin.
1. Read the passage given below, then answer in French the questions which follow it.

Le wagon de troisième classe dans lequel monta Léon ressemblait à un campement. Le couloir était encombré de gens—vieillards, femmes et enfants—and les compartiments étaient bondés. Léon comptait sur un bon sommeil et la perspective de passer six ou sept heures debout l’effrayait.

N’ayant pas de bagages il réussit à se glisser dans un autre wagon : même empilement de gens et de paquets. Il pensa un instant à changer son billet de troisième contre une première. Enfin, ayant franchi des obstacles sans nombre, il arriva à un compartiment où il y avait une place inoccupée. En lui montrant deux valises, on lui dit qu’elle était retenue. Il répondit qu’il se lèverait au retour du voyageur. Après quelque temps il pensa que le voyageur avait manqué le train, et il commença de s’inquiéter des valises. Mais peu à peu il cessa de se tourmenter et jouit honteusement du bonheur d’être assis.

QUESTIONS

Answer questions 1 to 6 in sentences, using the appropriate tense in each case.

(1) Comment savez-vous que Léon allait faire un long voyage ?
(2) Pourquoi a-t-il pensé à changer son billet ?
(3) Pourquoi a-t-il pu passer dans un autre wagon ?
(4) Pourquoi Léon avait-il honte d’être assis ?
(5) Si vous deviez faire un voyage jusqu’à Londres, quel moyen de transport choisisriez-vous et pourquoi ?
(6) Quand on voyage en chemin de fer :
   (a) Où prend-on son billet ?
   (b) Par où passe-t-on pour aller sur le quai ?
   (c) Où est-ce qu’on met les bagages dans un compartiment ?
   (d) Où est-ce qu’on prend les repas ?
(7) Que veut dire :
   (a) Léon comptait sur un bon sommeil ? (line 3).
   (b) Il se lèverait au retour du voyageur ? (line 9).
(8) Donnez le contraire de :
   (a) manquer le train ;
   (b) le bonheur ;
   (c) Léon monta.
(9) Exprimez autrement :
   (a) une place retenue ;
   (b) un vieillard.

Page two
2. Write, **in French**, a continuous story based on the following summary.

   **Your story should be from 150 to 200 words long. Use appropriate PAST tenses.**

Trois touristes font l'ascension d'une montagne—le brouillard tombe—ils passent la nuit sur la montagne—le lendemain ils sont retrouvés.

**OR**

Write, **in French**, a letter to your correspondent telling him (her) of your plans to spend a camping holiday.

   **Your letter should be from 150 to 200 words long. Use appropriate PAST tenses.**
1. Translate carefully, with due attention to English form and expression:

Antoine s’apprêtait à partir, lorsque son attention fut attirée par les acrobaties bizarres auxquelles se livrait son petit neveu. La butte* qu’il essayait de prendre d’assaut pouvait avoir deux mètres de haut; à droite et à gauche la pente était douce, d’accès facile; mais, sur la face centrale, l’escarpe était abrupt, et c’est par ce côté que l’enfant avait justement choisi de grimper. Plusieurs fois de suite, Antoine le vit prendre son élan, gravir la moitié de la pente, glisser et rouler à terre. Il ne pouvait se faire grand mal: un tapis d’aiguilles de pins amortissait les chutes. Il semblait tout à son affaire: seul au monde avec ce but qu’il s’était fixé. Chaque tentative le rapprochait de la crête, et chaque fois il dégringolait de plus haut.

“Comme il ressemble à son père,” songea Antoine, plus ému qu’il ne voulait le laisser voir.

Jean-Paul s’était de nouveau lancé à l’attaque: avec tant d’intrépidité, qu’il avait presque atteint le sommet du talus. Mais le sol s’effritait sous ses pieds, et il allait une fois de plus perdre l’équilibre, lorsqu’il saisit une touffe d’herbe, parvint à se retenir, et se hissa sur la plate-forme.

“Je parie qu’il va se retourner pour voir si je l’ai vu”, pensa Antoine.

Il se trompait. Le gamin ne s’occupait pas de lui. Il se tint une minute sur le faîte; puis, satisfait, il descendit tranquillement par l’une des pentes douces, et, sans même jeter un regard en arrière sur le lieu de son succès, il s’éloigna d’un pas délibéré.

* la butte = the hillock, mound
La Télévision

La télévision passait autrefois pour un plaisir “cher”, un luxe nullement indispensable. La baisse des prix d’achat, les facilités du crédit ont changé tout cela. Sur les maisons ouvrières et même sur les pauvres baraques où manque parfois le nécessaire, le nombre d’antennes de télévision atteste que la télévision était attendue, désirée, nécessaire.

A quoi tient cette immense faveur de la télévision populaire ? Précisément à ce qu’elle apporte un spectacle “total”, et même, si elle est bien dirigée, une culture relativement complète. Pour l’ouvrier qui a travaillé dur toute la journée, pour le commerçant écrasé de responsabilités et de fatigue, il n’est pas question de lectures studieuses. La télévision apporte précisément une documentation variée, éloquente et vivante qu’il suffit d’absorber. Elle répond à cet immense et spontané désir d’apprendre, qui fait le succès des encyclopédies ou des dictionnaires, mais avec une souplesse et un charme inégalables.

Au cinéma, on entend quelquefois cette déclaration peu obligeante :

“Nous sommes arrivés juste à point . . . à la fin du documentaire.”

Il n’est pas de même à la télévision, où le documentaire, le reportage, les voyages, sont particulièrement appréciés . . . sans parler des enseignements pratiques et des cours de cuisine. C’est là un bienfait social gigantesque, mais aussi, pour les dirigeants de la télévision, une grande responsabilité.

La télévision, en effet, exerce une véritable fascination. Au foyer, la télévision peut, bien sûr, faire quelque tort aux paires de chaussettes du raccommodage. On peut reprendre en écoutant la radio, non en suivant un spectacle sur l’écran !

La lecture peut être victime de la nouvelle fée, et avec elle, la rêverie qui s’accompagne mieux d’un accompagnement musical que des précisions de l’image mouvante. Mais le fait que le téléviseur retient toute la maisonnée réunie vaut bien le risque de quelques tentations.

La télévision, à part quelques montages de films, c’est l’actualité instantanée sur l’écran : voilà ce qui est entièrement nouveau et que ni le cinéma, ni la radio ne nous donnaient.

Ce geste sacramental de l’archevêque de Canterbury dans la cathédrale de Westminster, cette explosion, cet incendie, saisis par de hardis reporters traînant leurs câbles, ces mouvements de foules, ces performances sportives se déroulent strictement au moment où vous les voyez transmis à 300 000 kilomètres à la seconde, par la voie des ondes. Une telle “instantanéité” est peu favorable au mensonge; la tricherie est ici bien plus difficile qu’à la radio.

Tel est le vrai secret de la télévision : la présence réelle, qu’il s’agisse d’un événement ou d’une personne, la réalité s’impose à nous avec toutes ses puissances de persuasion.
QUESTIONS

A. Answer in English:—

(1) How and to what extent has the general attitude to television changed in recent years?
   How does the author account for this change? 5

(2) In what respects does television fulfil the same functions as books do?
   In what ways has it proved more acceptable than books? Why should this be so? 8

(3) “Nous sommes arrivés juste à point . . . à la fin du documentaire.”
   (line 15)
   In what circumstances would such a statement be made? What does it imply? Would the same be true of television? 2½

(4) As far as the home is concerned, what advantages and what disadvantages does television have? What reasons are suggested? 5

(5) What does the author claim is the secret of the attraction of television? How does he illustrate the point he is making? 5½

B. Answer in French:—

(6) Expliquez en quoi consiste la grande responsabilité dont parle l’auteur.
   (ligne 19) 4

3. Translate carefully, with due attention to English form and expression:—

L’hiver, cette année-là, fut terrible. Dès la fin de novembre, les neiges arrivèrent après une semaine de gelées. On voyait de loin les gros nuages venir du nord; et la blanche descente des flocons commença.

En une nuit, toute la plaine fut ensevelie.

Les fermes, isolées dans leurs cours carrées, derrière leurs rideaux de grands arbres, semblaient s’endormir sous cette mousse épaisse et légère.

Aucun bruit ne traversait plus la campagne immobile. Seuls les corbeaux, par bandes, décrivaient de grands cercles dans le ciel, cherchant leur vie inutilement, s’abattant tous ensemble sur les champs livides et piquant la neige de leurs grands becs.

On n’entendait rien que le glissement vague et continu de cette poussière tombant toujours.

Cela dura huit jours pleins, puis l’avalanche s’arrêta. La terre avait sur le dos un manteau épais de cinq pieds. Et, pendant trois semaines ensuite, un ciel clair comme un cristal bleu, le jour, et, la nuit, tout semé d’étoiles, s’étendit sur la nappe unie, dure et luisante des neiges.

La plaine, les haies, les ormes, tout semblait mort, tué par le froid. Ni hommes, ni bêtes ne sortaient plus: seules, les cheminées des chaumières révélaient la vie cachée, par les minces filets de fumée qui montaient droit dans l’air glacial. [25]
FRENCH

Higher Grade—(Second Paper (a))

AURAL COMPREHENSION TEST

Wednesday, 8th May—1.30 p.m. to 2.0 p.m.

This paper must not be seen by any candidate

INSTRUCTIONS TO THE TEACHER

1. Use the ten minutes preceding the beginning of the examination to make yourself thoroughly familiar with the passage to be read.

2. When so instructed by the Invigilator, read to the candidates the "Instructions to Candidates" given below.

3. Then read the passage aloud to the candidates, speaking clearly and naturally, and taking not more than four minutes to the reading.

4. After this reading inform the candidates that they will have three minutes in which to study the questions. You yourself will not be allowed to see the questions which are to be answered by the candidates.

5. When so instructed by the Invigilator, read the passage a second time, in exactly the same manner as on the first occasion and taking the same amount of time.

6. After the second reading you should leave the examination room.

INSTRUCTIONS TO CANDIDATES

1. Listen carefully to the following passage with a view to answering questions on its content.

2. The questions are to be answered in English.

3. The passage will be read twice, with an interval of three minutes between the readings.

4. No writing should be done while the passage is being read.

5. You may not ask for the repetition of any word or phrase.
Le vendredi soir le fermier est venu me chercher à la gare avec sa voiture, et, en me conduisant à notre maison de campagne, il me raconte les divers événements qui agitent le pays. Il y a notre chat qu’on a retrouvé après six jours de disparition; il y a le facteur qui, poursuivi par un chien, a voulu grimper dans un pommier, en est tombé et s’est cassé la jambe. Et surtout il y a le porte-monnaie de ma femme qui a été volé.

— Volé, dis-je étonné, quand ça ?

— Juste après l’arrivée de Madame, répondit le fermier, il y a deux jours. Vous avez télégraphié pour avoir une adresse qui se trouvait dans le porte-monnaie et c’est alors que Madame l’a cherché partout sans pouvoir le retrouver.

— Alors, dis-je, celui qui a fait le coup a bien choisi son moment. Le porte-monnaie contenait sans doute une certaine somme.

— Heureusement, continua le fermier, Madame m’avait remis tout de suite deux cents francs pour régler une note et il ne lui restait qu’un billet de cent francs et quelques pièces. Il y avait aussi la clef de la malle et une collection de timbres étrangers que Madame voulait envoyer à sa petite nièce.

— Est-on vraiment sûr qu’il est perdu, demandai-je.

— On a cherché partout, répondit mon compagnon. Mais nous avons nos soupçons. Je crois que c’est le petit Julien qui a fait le coup pendant qu’il montait les bagages. Les deux autres ouvriers, je les connais depuis longtemps et j’ai confiance en eux. D’ailleurs ils montaient à deux les grosses malles, ce qui fait qu’il leur aurait fallu se mettre d’accord pour le vol. C’est déjà difficile à croire. Au contraire, Julien, qui était chargé des petits bagages, les montait seul. Madame se rappelle qu’elle a posé son porte-monnaie sur la table de la salle à manger. Julien n’avait donc qu’à étendre la main pour le prendre en passant. Et il y a encore quelque chose. Quand ma femme a su la disparition du porte-monnaie, elle a dit à Julien: “Est-ce que tu n’étais pas là-bas, toi aussi ?” Mais il a tout de suite affirmé qu’il n’y avait pas été. C’était un mensonge évident.
AURAL COMPREHENSION TEST

Wednesday, 8th May—1.30 p.m. to 2.0 p.m.

Answer in English the following questions on the passage read to you.

QUESTIONS

1. (a) When and under what circumstances did the author learn of the theft?
   (b) What other pieces of news did he hear?

   Marks
   5

2. (a) When did the theft occur and how was it discovered?
   (b) What did the stolen article contain and what made the theft less serious than it might have been?

   Marks
   5

3. What persons might have been suspected of the theft and why were they judged innocent?

   Marks
   2\frac{1}{2}

4. On whom did suspicion fall and for what reasons?
   What fact seemed to confirm this suspicion?

   Marks
   2\frac{1}{2}

   (15)
SCOTTISH CERTIFICATE OF EDUCATION

FRENCH

Higher Grade—(Second Paper (b) )

Wednesday, 8th May—2.15 p.m. to 4.0 p.m.

Marks may be deducted for writing that is difficult to read.

The value attached to each question is shown in brackets after the question.
1. Translate into French:—

Slowly he began to walk round the house in the hope of finding a window open. But ten minutes later he was back at his starting point without having found one. He wondered what he should do. If the house was empty there would probably be no food; all the same it was a shelter for the night. Finally he decided he must get in and two minutes later there was the sound of a window being opened.

Once inside the room, he stopped and listened but he could hear nothing. His first thought was to find the kitchen. Cautiously he left the room and advanced along a dark corridor. He came to a door which he opened without difficulty and he realised he was in luck after all: a delicious smell of food reached his nostrils and his groping hands touched the edge of a table. Very gently his fingers explored the surface. What was that? A cup and saucer and—a candle. Then his fingers met a knife and a plate with meat on it, and something he had seen only in his dreams for years: a bottle of beer.

He had almost decided to begin to eat despite the darkness, when he suddenly touched a box of matches. For a moment he hesitated. Would he take the risk? Then with a shrug he lit the candle and there, before his astonished eyes, lay a meal that seemed to have been prepared specially for him. The convict sat down and ate like a famished wolf.

2. Write, in French, an essay on one of the following subjects.

Your essay should be from one to one-and-a-half times the length of the translation of Question 1.

(a) Vous faites un séjour dans une famille française, et vous écrivez à vos parents pour leur donner de vos nouvelles en soulignant ce que vous y trouvez de nouveau et d’intéressant.

(b) Visite d’un personnage célèbre à votre lycée.

(c) Votre oncle, qui a fait fortune à l’étranger, revient vous voir. Racontez sa vie et ses aventures.
1963

SCOTTISH CERTIFICATE OF EDUCATION

GERMAN

Ordinary Grade—(First Paper (a))

AURAL COMPREHENSIGN TEST

Wednesday, 22nd May—9.15 a.m. to 9.45 a.m.

This paper must not be seen by any candidate

INSTRUCTIONS TO THE TEACHER

1. Use the ten minutes preceding the beginning of the examination to make yourself thoroughly familiar with the passage to be read.

2. When so instructed by the Invigilator, read to the candidates the “Instructions to Candidates” given below.

3. Then read the passage aloud to the candidates, speaking clearly and naturally, and taking not more than four minutes to the reading.

4. After this reading inform the candidates that they will have three minutes in which to study the questions. You yourself will not be allowed to see the questions which are to be answered by the candidates.

5. When so instructed by the Invigilator, read the passage a second time, in exactly the same manner as on the first occasion and taking the same amount of time.

6. After the second reading you should leave the examination room.

INSTRUCTIONS TO CANDIDATES

1. Listen carefully to the following passage with a view to answering questions on its content.

2. The questions are to be answered in English.

3. The passage will be read twice, with an interval of three minutes between the readings.

4. No writing should be done while the passage is being read.

5. You may not ask for the repetition of any word or phrase.

6. The title of the passage is: The Doll’s Pram.
Bei ihrem Großvater auf dem Lande, wo sie jedes Jahr die Sommerferien verbrachte, fand Inge eines Tages einen alten Puppenwagen, der ihrer Mutter als Kind gehört hatte.


Doch als sie wieder einmal in den Ferien zu den Großeltern kam, war der gute Marko von einem Auto getötet worden. Sie hatte nun keinen Hund mehr zum Umherfahren und so setzte sie sich selbst in den Wagen. Mit den Füßen, die außen herabhingen, schob sie den Wagen vorwärts. Aber das dauerte nicht lange; sie war doch zu schwer für den alten, schwachen Wagen, und allein spielen machte ihr keine Freude.


Dieser alte Puppenwagen blieb für Inge ein Gegenstand lieber Erinnerung an ihre Kindheit, denn mit keinem anderen Spielzeug hat sie so viel Vergnügen gehabt.
SCOTTISH CERTIFICATE OF EDUCATION

GERMAN

Ordinary Grade—(First Paper (a))

AURAL COMPREHENSION TEST

Wednesday, 22nd May—9.15 a.m. to 9.45 a.m.

Answers are to be written (in English) on the sheet provided for the purpose, on which are also to be written any notes made between the readings.

QUESTIONS

1. Describe, giving details, what Inge found. Where did she find it and to whom had it belonged?

2. What was Marko's part in her game and why? How did he behave?

3. Why was Marko not there on her next visit? How did she then amuse herself and why did this not last long?

4. What was the next game Inge played and with whom did she play it?

5. What was the last use to which Inge's toy was put?

6. Why did this toy make such an impression on Inge in later years?
1963
SCOTTISH CERTIFICATE OF EDUCATION

GERMAN

Ordinary Grade—(First Paper (b))

Wednesday, 22nd May—10.0 a.m. to 11.30 a.m.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.
The value attached to each question is shown in brackets after the question.
1. Read carefully the passage given below, then answer in English the questions which follow it.

**The Illness**


Am Nachmittag wollte er zum See gehen aber der Weg dorthin war schattenlos und staubig, auch wollte er nicht seine Mutter fragen; ihre Augen erschienen ihm seit Tagen so traurig. Er ging in den Garten hinab aber das frohe Summen der fleißigen Bienen gefiel ihm nicht wie früher, und das kleine Haus, das er oben in den Ästen der hohen Linde gebaut hatte, blieb heute leer. Vor dem Hause legte er sich ins Gras und überlegte: eine Krankheit—das war Fieber haben und Kopfschmerzen. Krank wurde man im Herbst, wenn man mit nassen Füßen durch die nebligen Wiesen lief, oder im Winter, wenn es zu taun begann und das Schneewasser jeden Schuh weich machte. Krank sein war schlimm, weil man im Bett liegen und schwitzen mußte, aber es war auch wieder nicht so schlimm, weil dann die Mutter endlich Zeit hatte, das Glas mit kühlem Fruchtsaft an die Lippen führe und Geschichten vorlas. Und wenn man wieder gesund war und aufstehen durfte, brauchte man nicht gleich zur Schule zu gehen; wie die Mutter sagte, mußte man sich erholen. Aber dies war wohl eine andere Krankheit mitten im heißen Sommer.


Plötzlich sah er seine Mutter an der Haustür; ihr Gesicht strahlte vor Freude. Er stand schnell auf, lief auf seine Mutter zu, und als er sie halb lachend, halb weinend, da stehen sah, wußte er, daß es der Schwester schon besser ging. Auf einmal lachte die Welt.

* Entzündung—inflammation

**QUESTIONS**

1. With reference to the text, describe the effect of the girl’s illness on (a) her mother and (b) her brother.

2. Explain what the boy understood by illness, and what seemed to him its advantages and disadvantages?

3. What did he find strange about his sister’s illness?

4. “Fast beneidete er die Schwester” (line 19). Explain the envy which the author is referring to here.

5. Why did his feeling of envy change to one of concern? Describe how this concern was finally removed.

Page two
Wir waren am späten Nachmittag in einer kleinen alten Stadt angekommen, die nahe der holländischen Grenze lag. Ich erinnere mich noch genau an die schöne Stadt und ihre engen, dunklen Gassen. In der Mitte stand eine sehr alte Kirche mit zwei hohen Türmen, und eine Steintreppe mit vielen Stufen führte zu der Kirche hinauf. Mein Vater wollte sich die Haare schneiden lassen und er erlaubte mir, inzwischen, allein zur Kirche hinaufzugehen; in einer halben Stunde sollte ich ihn im Laden wieder abholen. Bald war ich oben und blickte vom Kirchplatz aus in die Ferne. Es begann, dunkler zu werden; auf den Schnee warf eine Lampe ihr gelbes Licht.

GERMAN

Ordinary Grade—(Second Paper)

Wednesday, 22nd May—2.15 p.m. to 3.45 p.m.

Marks may be deducted for writing that is difficult to read.

The value attached to each question is shown in brackets after the question.
Der Brunnen


QUESTIONS

Answer questions 1 to 9 in sentences, using the appropriate tense in each case.

(1) Wo wohnte der Junge?
(2) Wohin ging er, wenn er seine Großmutter besuchte?
(3) Was war dem Jungen verboten und warum?
(4) Was ist ein Steinchen?
   Was tat der Junge mit dem Steinchen?
(5) Warum war ihm das Dorf eine zweite Heimat?
(6) Warum war das Schlafzimmer voll von grünen Licht?
(7) Wann kraht ein Hahn gewöhnlich? Was macht ein Hund?
(8) Wie oft haben Sie Ferien im Jahre? Wann?
(9) Was trinkt man gewöhnlich zum Frühstück in Deutschland? Was trinken Sie zum Frühstück?
(10) Erklären Sie die folgenden Ausdrücke!
   (a) ein vierjähriges Kind.
   (b) mein erster Weg war zum Brunnen.
   (c) ein Bauernjunge.
(11) Was ist das Gegenteil von:
   (a) zum ersten Male.
   (b) das Erwachen.
   (c) früh.
   (d) hierher?
2. Write, in German, a continuous story based on the following summary.

   Your story should be told in the past tense and should be from 150 to 200 words in length.

   Ein Junge und seine Schwester essen in einem Restaurant. Sie finden, daß sie nicht bezahlen können. Sie müssen in der Küche arbeiten. (25)

   OR

   Write, in German, the story shown in the accompanying picture-series.

       Der hoffnungsvolle Angler

   Your story should be from 150 to 200 words in length.
   Use appropriate PAST tenses. (25)
1963
SCOTTISH CERTIFICATE OF EDUCATION

GERMAN

Higher Grade—(First Paper)

Wednesday, 22nd May—10.0 a.m. to 12.15 p.m.

Begin the answer (or fair copy of an answer) to each question on a fresh page.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question is shown in brackets after the question.
1. Translate carefully, with due attention to English form and expression:—

(a) Der junge Peter ging eines Tages allein zu der Wiese, wo das Vieh im Schatten eines Baumes lag. Er kroch durch den Zaun und ging klopfenden Herzens auf die Herde zu. Auch der Stier lag ruhig und nahm zuerst keine Notiz von dem Kind. Peter wußte nicht, was er jetzt tun sollte. Was er schon gewagt hatte, schien ihm noch nicht genug. Er riß sich also das rote Tuch vom Hals und begann es hin und her zu schwenken. Der Stier rührte sich auch jetzt nicht sofort, sondern blickte nur mit zornroten Augen nach ihm und fing dann an, immer lauter und drohender zu brüllen. Davon erschreckt, rannte Peter dem Zaun zu, das rote Tuch immer noch festhaltend—and hinter dem flatternden Tuch her der Stier. Der Zaun war glücklicherweise so nah, daß Peter ihn erreichen und überklettern konnte, aber das zornige Tier warf sich jetzt gegen die Zaunstangen, die bald niederbrachen.


2. [TURN OVER]
2. Carefully read the passage given below, then answer the questions which follow it.

The passage is NOT to be translated.

Der Geschäftsreisende


Dennoch bin ich glücklicher, als viele meiner Berufsgenossen. Glücklicher als jene zum Beispiel, deren umfangreiche Ware sie zur Mitnahme eines riesigen Koffers voll von Mustern zwingt. Meine Kaffeebohnen befinden sich in zwanzig bis dreißig Papiertüten in einer Handtasche.

Ich erlebe aber niemals einen der größten Reize des Reisens: mit Sehnsucht erwartet zu werden. Denn selbst der Kaufmann, der meinen Kaffee braucht, gesteht es nicht. Und sogar wenn er froh ist, meinen Kaffee zu kaufen, tut er so, als müßte ich froh sein, meine Ware loszuwerden. Und wenn er überzeugt ist, daß er so günstig wie noch nie gekauft hat, benimmt er sich so, als hätte er mich aus purer Freundschaft “etwas verdienen lassen”. So wird der scheinbar einfache Verkauf eines Sacks Kaffeebohnen zu einem wirklichen Krieg mit allen seinen Phasen: Defensive des Feindes, heimliches Heranschleichen des Angreifers, plötzliche Offensive, Erstürmung der Hindernisse, leider auch Rückzug und sogar jähe Flucht.


A. **Answer in English:**—

1. "Man merkt die leise Ironie des Kontrastes" (line 3).
   (a) To what contrast is the author referring here?
   (b) Show how far he considers this contrast typical of his whole existence. 5

2. According to the author how does his life differ from that of some of his colleagues? 3

3. What in the author’s opinion is one of the greatest charms of travel? Explain why he never experiences it. 6

   With which warlike operations does the author compare his work, and how appropriate is the comparison in describing his dealings with his customers? 8

5. How does the author continue the comparison in paragraph 4? 3

6. What consolation does he nevertheless derive from his job? 2

B. **Answer in German:**—

7. Erklären Sie mit eigenen Worten die folgenden Ausdrücke:—
   (a) Die Schrecken des Krieges (line 23). 1½
   (b) Das Reisen in Kaffee erfordert Talent (line 28). 1½

(C41570)
SCOTTISH CERTIFICATE OF EDUCATION

GERMAN

Higher Grade—(Second Paper (a))

AURAL COMPREHENSION TEST

Wednesday, 22nd May—1.30 p.m. to 2.0 p.m.

This paper must not be seen by any candidate

INSTRUCTIONS TO THE TEACHER

1. Use the ten minutes preceding the beginning of the test to make yourself thoroughly familiar with the passage to be read.

2. When so instructed by the invigilator, read to the candidates the "Instructions to Candidates" given below.

3. Then read the passage aloud to the candidates, speaking clearly and naturally, and taking not more than four minutes to the reading.

4. After this reading inform the candidates that they will have three minutes in which to study the questions. You yourself will not be allowed to see the questions which are to be answered by the candidates.

5. When so instructed by the invigilator, read the passage a second time, in exactly the same manner as on the first occasion and taking the same amount of time.

6. After the second reading you should leave the examination room.

INSTRUCTIONS TO CANDIDATES

1. Listen carefully to the following passage with a view to answering questions on its content.

2. The questions are to be answered in English.

3. The passage will be read twice, with an interval of three minutes between the readings.

4. No writing should be done while the passage is being read.

5. You may not ask for the repetition of any word or phrase.
In einem kleinen Dorf in den bayerischen Bergen lebte Frau Müller. Sie war Witwe und hatte ihren Mann im Krieg verloren. Mit dem wenigen Geld, das sie als Kriegswitwe bezog, konnte sie keineswegs auskommen. Sie mußte sich daher nach einer Erwerbsmöglichkeit umsehen, und was war natürlicher in diesem Alpenland als der Gedanke, aus dem Fremdenverkehr Nutzen zu ziehen.


Sie hatte Glück über Erwarten, denn schon ein paar Tage später kam ein hochgewachsener Herr über die krachzende Treppe in den ersten Stock. Er nahm den Hut nicht ab im Zimmer, warf einen kurzen Blick aus dem Fenster, griff sich eine Blume aus der blaubemalten Vase, steckte sie in das Knopfloch und sagte: „Gemietet!“ Dann lachte er schellend auf, schlug die Witwe mächtig auf die Schulter und schrie: „Der Preis!“ Die Witwe nannte ihren Preis, sie nannte ihn zögernd und mit ein wenig schlechtem Gewissen, denn er schien ihr recht hoch. Der Herr aber bezahlte ohne ein Wort zu sagen und ließ sich das Kleingeld nicht herausgeben auf der Banknote, mit welcher er zahlte, obgleich die Summe die Miete für weitere zehn Tage gedeckt hätte.

AURAL COMPREHENSION TEST

Wednesday, 22nd May—1.30 p.m. to 2.0 p.m.

Answers are to be written on the sheet provided for the purpose, on which are also to be written any notes made between the readings.

QUESTIONS

Answer in English the following questions on the passage read to you.

1. What did Frau Müller decide to do and for what reason?  
   
   Marks

2. What steps did she take to carry out her plan?

   Marks

3. Describe the behaviour of the first visitor, and say why Frau Müller was so pleased with him.

   Marks

4. Who was the visitor and how long did he stay?

   Why did Frau Müller feel sad at his departure?

   Marks

5. After the visitor's departure what further steps did Frau Müller take and how successful were they?

   Marks

(15)
1. Translate into German:

One morning in the month of April, I awoke to find Holmes standing by the side of my bed. He was a late riser as a rule, and, as the clock showed that it was only a quarter past seven, I looked up at him a little surprised and annoyed.

"What's wrong?" I asked.

"Nothing, my dear Watson," he replied calmly. "I'm sorry to disturb you so early in the morning, but it seems that a young lady has arrived and insists on seeing me. She is very agitated and I am of the opinion that she has something important to tell me. If it happened to be an interesting case, you would, I am sure, wish to follow it from the outset. I thought, at anyrate, that I ought to give you the chance."

"My dear fellow," I replied, "I would not miss it for anything," and jumping out of bed, I rapidly put on my clothes. In a few minutes I was ready to accompany my friend downstairs. As we entered the room, a young lady, dressed in black, rose and greeted us timidly.

"Good morning," said Holmes cheerily. "My name is Sherlock Holmes and this is my good friend Watson, before whom you can speak freely. But I see that you are shivering. Come closer to the fire and I shall order you a cup of hot coffee."

"It is not with cold that I am shivering," said the lady in a low voice, "but with fear."
2. Write, in German, an essay on one of the following subjects.

Your essay should be from one to one-and-a-half times the length of the translation of question 1.

(a) Eine Fußreise in den Bergen.
(b) Ein merkwürdiges Erlebnis.
(c) Mein Steckenpferd. (Beschreiben Sie, wie Sie sich am liebsten in Ihrer Freizeit beschäftigen.)
SCOTTISH CERTIFICATE OF EDUCATION

GAELIC (NATIVE SPEAKERS)
Ordinary Grade—(First Paper (a))

AURAL COMPREHENSION TEST

Monday, 20th May—1.15 p.m. to 1.45 p.m.

This paper must not be seen by any candidate

INSTRUCTIONS TO THE TEACHER

1. Use the ten minutes preceding the beginning of the test to make yourself thoroughly familiar with the passage to be read.

2. When so instructed by the invigilator, read to the candidates the “Instructions to Candidates” given below.

3. Then read the passage aloud to the candidates, speaking clearly and naturally, and taking not more than four minutes to the reading.

4. After this reading inform the candidates that they may now turn over the printed question papers, and that they will have three minutes in which to study the questions. Remind the candidates that they may make notes during this interval of three minutes, but only on the sheets provided for the answers. You yourself will not be allowed to see the questions which are to be answered by the candidates.

5. When so instructed by the invigilator, read the passage a second time, in exactly the same manner as on the first occasion and taking the same amount of time.

6. Remind the candidates that the questions are to be answered in English.

INSTRUCTIONS TO CANDIDATES

1. Listen carefully to the following passage with a view to answering questions on its content.

2. The questions are to be answered in English.

3. You are on no account to touch the printed question paper or to do any writing until you are told to do so.
4. The procedure will be as follows:—
   (i) The passage will be read **twice**, with an interval of three minutes between the readings.
   (ii) After the first reading you will be allowed to turn over the printed question paper and you will have three minutes in which to study the questions.
   (iii) After the second reading you will write your answers on the sheet provided for this purpose.

5. All writing during the first and second readings is strictly forbidden. Notes may be made during the interval between the readings, but only on the sheet provided for the answers.

6. You may not ask for the repetition of any word or phrase.

   **Passage to be read to the candidates :—(Maximum time of reading—four minutes).**

   Air oidhche shoilleir gheamhraidh, bha cailleach a' teàrnadh sios 'na cabhaig ri òir cuirn am beachd dol do 'n tràigh a chruinneachadh duileasg agus faochagan. Bha gealach làn air a coinneil an àird an adhair, a' soilleireachadh gach àite cho meadhraich's nach mór nach faiceadh duine rud cho beag ri bior giogain a rachadh an sás ann am bonn a choise.

   Thuit do bhean ar sgeòil sealtainn air a fiaradh a-null air a' chàrn. Cha bu thàrr dhi so a dhèanamh ach gann an uair a laigh a stiùl air plathadh de 'n ghealaich a bha toirt air ni-eigin deàrrsadh le solus neo-àbhaisteach air mullach té de na clachan móra.

   Rinn i air an t-solus, agus air dhi a ruigheachd dé fhuair i anns an dearbh àite ach coire loma làn de bhluinn òir.

   An àite falbh dhachaidh direach leis an ulaidh anns an robh fortan dhi cho fad's bu bheò i, is ann a chuir a' chaileach roimpe air dhi mothachadh do 'n lionadh a' tighinn, gun déanadh i air an tràigh agus gun cuireadh i an coire am falach fo 'n chloich airson a bhith tèaruinte gus an tigeadh i air ais.

   An déidh do 'n bhean an coire fhàgail fo 'n chloich cheudna, chùm i oirre do 'n chladach an làn chinnt gum faigheadh i e air an t-slighe dol dhachaidh. Cha b' eagal gum rachadh iiomrá, oir nach robh am boillsgeadh de sholus na gealaich a bha a' dealraidh air a' chloich, 'na leòr chomharrha.

   Gu tubaisteach dhi-chuimhnich ise an fhior chlach far an do dh'hfolaich i an fhaodail is thug i an còrr de 'n oidhche, is iomadh oidhche a bhàrr oirre, a' siubhal bho chlach gu cloich, 's bho tholl gu toll ag amharach airson a' choire is ged a chaiteadh i a' chuid eile de a beatha ris an aon saothair, cha bhiodh ann ach diomhanas.

   Có aige tha fios nach tig cuideigin fathast, air oidhche gheal ghealaich, air iomhas a' Chùrin Mhóir, ach feumar a chumail air chuimhne nach faighear ualadh le h-iarradh's nach lorgar i le sireadh.
Gaelic NS/(Ordy I(a))  
Aural Comp—Questions

SCOTTISH CERTIFICATE OF EDUCATION

GAELIC (NATIVE SPEAKERS)

Ordinary Grade—(First Paper (a))

AURAL COMPREHENSION TEST

Monday, 20th May—1.15 p.m. to 1.45 p.m.

Answers are to be written on the sheet provided for the purpose, on which are also to be written any notes made between the readings.

QUESTIONS

1. Where was the old woman going and why?  
2. How does the narrator indicate that the night was exceptionally bright?  
3. What attracted the woman's attention on the way? Tell what she found.  
4. What did she decide to do before continuing her journey? Explain why she did this.  
5. Tell why she thought she was justified in her action.  
6. What was the cause of her disappointment?  
7. What is the moral of the story?

Marks

2

2

2

3

2

2

(15)

[ 45 (a) ]
GAELIC (NATIVE SPEAKERS)

Ordinary Grade—(First Paper (b))

Monday, 20th May—2 p.m. to 3.45 p.m.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read. The value attached to each question is shown in the margin.
1. Read the poem below, then answer the questions which follow it:

N.B.—The poem is NOT to be translated

So deoch slàinte Shir Cailein
Thar fearaibh an t-saoghail;
An Caimbeulach sgairteil
Chaidh a mach 'na Cheann-feadhna;
5 Bhon chaidh thu thar chuantan
Dh' éirich buaidh air gach taobh leat,
Rinn do naimhdean dhuit striochdadh,
'S rinn iad siochaint a ghlaoadh.

Tha mo chion air an uasal,
10 Morair Chluaidh tha mi 'g ràdhtainn,
Fhuair thu meas agus urram
Thar gach duine de 'n àl so,
Ann am foghlum 's an glicnas,
'S ann am misneachd neo-sgàthach;
15 Cha bu mheat air ceann sluaigh thu
Cur na ruaig air do ñamhaid.
'S truagh nach clùinninn an sgeula
Gun eòr' ann ad Dhùc thu
'S gun tìgeadh tu dhachaidh
20 Làin aiteis gu d' dhùthaich:
A Cheann-feadhna nan Gàidheal,
Do dheoch-slàinte cha diùlt sinn,
'S mi gun dèanadh a tràghadh
Ged phàighinn na crùntan.
25 Craobh as àird' anns an doir' thu
Ann an coille nan Gàidheal;
Seobhag uasal na h-ealta,
'S ursann-chatha 's na blàraibh.
'Thu gu h-iriosal, macant',
30 Coibhneil, tairís ri d' chàirdean,
'S mar an leòmhann gu casgradh,
'N às bhith tachairt ri d' ñamhaid.

QUESTIONS

The answers to the following questions may be in either Gaelic or English except when otherwise indicated.

(1) What was Sir Colin's profession? What evidence is given that he was particularly successful?
(2) Give, in English, two titles by which he is addressed. Tell fully why he was held in high esteem.
(3) What two wishes does the poet express? How would he show his pleasure at the fulfilment of these wishes?

(4) Explain the metaphors which are used to illustrate Sir Colin’s manly qualities.

(5) Contrast his attitude to (a) his friends, and (b) his enemies.

(6) Give words or phrases which mean the same as:

sgairteil, (3) mo chion, (9) misneachd, (14) casgradh, (31)

and comment on the case of chuantan (5) and the tense of phàighinn (24).

TRANSLATION INTO ENGLISH

2. Translate into English:—

A measg nan Ceilteach gu h-iomlan, agus tomhas mór de chinnich eile, bha bualadh anabarrach aig saobh-chreidimh an cridheachan an t-sluagh. Bha iad a’ creidsinn an làn da-rìreachd gu roth dream de dhaoinne beaga ann a bhà, ann an tomhas, neo-thalmhaidh. Is ionann ainm do ’n treubh bhig so an Eirinn is ann an Albann, agus tha rioghasdan eile anns an Roinn Eòrpa, nach ruigeir a leas ainmeachadh, a bhais iad air an aon sloinneadh.

Air fèadh a’ mhòr chuid de Ghaidhealtachd na h-Alba air an là an diugh tha sluagh, am bitheantas, air an saobh-chreideamh so àicheadh, ach tha fathast cuid a’ deachdadh nan dearbh earalan a bha aig an sinneir; co-dhìubh is ann a’ cumail suas an t-seann nòis a tha iad, no ann an diomhairesachd an cridheachan, a’ creidsinn anns na sithichean, chan eil math a ràdh. Air an làimh eile tha a’ mhòr chuid dhìubh a’ creidsinn gu roth sithichean ann; gu feumar, co-dhìubh gu roth rudan neònach a’ tachairt anns na lìnntean a dh’ fhthalbh, air neach nach biodh aithris orra.

Ged a tha mòthadh sgeòil aig gach sgire mu an deighinn chan eil a h-aon diubh calg dhireach an agaidh a chèile; chan eil ann ach atharrach aithris air prathan is cleas nan daoine beaga.

Bha ar n-athairichean uile de ’n beachd gum b’ iad mac-samhail an duine choisteann ann an cruth is an dreach ach gu roth iad fior bheag ’nam pearsa, na bu lugha na naoidhean; gu roth iad ’nan luchd-ceaird ealanta agus ro dheidheadh air ceòil is dannsadh; an uair a bhiodh iad ’nam bruighean féin gum b’ fhearas-chuideachd an saoghal dhaibh.

Marks

4

3

2

5

(21)
Gaelic (Native Speakers)

Ordinary Grade—(Second Paper)

Monday, 20th May—9.30 a.m. to 11.15 a.m.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question is shown in the margin.

SECTION A

1. Write, in Gaelic, a continuous story based on the following summary, and complete it in your own way. Give it a title.
   Uamh cladaich—sgeul gu rohuladh innte—chaidh dìhis no triùr de chlann a’ bhaile air a tòir—chunnaic iad leus soluis san dorchadas—bha cuid-eigín romhpa . . .

OR

Write an essay on one of the following subjects:

(a) Litir gu caraid no bana-charaid a’ toirt cuiridh làithean-saora chur seachad còmhlra riut.

(b) Thoir cuantas air aon dhiubh so:

   am posta; an dotair; an greusaiche; fear a’ cheadha; ban-altrum na sgire.

(c) Turus Dhòmhnaill do ’n bhaile mhór.

Your composition should be from 150 to 200 words long
SECTION B

Candidates should attempt THREE questions from this section. Of these, ONE must be from Part I and ONE from Part II. The third question may be from either Part I or Part II. All questions must be answered in Gaelic.

Part I

2. Dean eadar-dhealachadh soilleir an ceithir de na càraidean fhacal a leanas:—
   caraich, càirich; mean, meann; onair, ònar; dail, dàil; smal, smàl;
   faisg, fàisg; giall, ciall. (8)

3. Cuir crioch air ceithir de na seanfhacail so agus thoir mineachadh an Gàidhlig
   air aon dhiubh:—
   (i) A’ bheinn as aird an tè anns an tìr ’s ann oirre . . . .
   (ii) Is fhéarr bhith a dhith a’ chinn na . . . .
   (iii) Ge fada an duan . . . .
   (iv) Is e farmad a ni . . . .
   (v) An car a tha san t-seana mhaide . . . .
   (vi) Is treasa tuath na . . . . (8)

4. Cleachd ochd dhiubh so air dòigh a dh’foilsicheas a’ bhrigh a tha aca:—
   am feabhas; tha romham; theab (mi); do-dhèanta; fathann; sàr;
   diombach; is mithich; mu thuairream; chan ionann; teachd-an-tìr; sochàir. (8)

Part II

5. Tagh ochd a’inmean-aite is innis, am facal no dhà, ciall gach aîm. (8)

6. Thoir iomradh air bàrd Gàidhealach mu ’n cuala tu, sònraich òran a rinn e,
   agus innis brigh an òrain sin. (8)

7. Thoir cunntas goirid air (1) seann chleachdadh, no (2) saobh-chreideamh no
   (3) seann eachdraidh a thà, no bhà, co-cheangailte ris an aîte sam bheil thu. (8)
Gaelic L/(Ordy (a))

SCOTTISH CERTIFICATE OF EDUCATION

GAELIC (LEARNERS)

Ordinary Grade—(Paper (a))

AURAL COMPREHENSION TEST

Monday, 20th May—2.30 p.m. to 3.0 p.m.

This paper must not be seen by any candidate

INSTRUCTIONS TO THE TEACHER

1. Use the ten minutes preceding the beginning of the test to make yourself thoroughly familiar with the passage to be read.

2. When so instructed by the invigilator, read to the candidates the “Instructions to Candidates” given below.

3. Then read the passage aloud to the candidates, speaking clearly and naturally, and taking not more than four minutes to the reading.

4. After this reading inform the candidates that they may now turn over the printed question papers, and that they will have three minutes in which to study the questions. Remind the candidates that they may make notes during this interval of three minutes, but only on the sheets provided for the answers. You yourself will not be allowed to see the questions which are to be answered by the candidates.

5. When so instructed by the invigilator, read the passage a second time, in exactly the same manner as on the first occasion and taking the same amount of time.

6. Remind the candidates that the questions are to be answered in English.

INSTRUCTIONS TO CANDIDATES

1. Listen carefully to the following passage with a view to answering questions on its content.

2. The questions are to be answered in English.

3. You are on no account to touch the printed question paper or to do any writing until you are told to do so.
4. The procedure will be as follows:—

(a) The passage will be read **twice**, with an interval of three minutes between the readings.

(b) After the first reading you will be allowed to turn over the printed question paper and you will have three minutes in which to study the questions.

(c) After the second reading you will write your answers on the sheet provided for this purpose.

5. All writing during the first and second readings is **strictly forbidden**. Notes may be made during the interval between the readings, but only on the sheet provided for the answers.

6. You may not ask for the repetition of any word or phrase.

**Passage to be read to the candidates :—** *(Maximum time of reading—four minutes)*

Tha eilean beag a'ig ceann a deas Eirisgeidh ris an abrar an Staca, agus tha caisteal air an eilean so air a bhile an t-a'aimh Caisteal an Reubadair. A réir eachdraidh nam bodach's e fear a bhà anns an reubadair so a bhiodh a' dol seachad air an Staca. Air oighcheannan geamhrdh lasadh e solus ri taobh a' chladaich, is long sam bith a bhiodh an deuchainn sa’ Chuan Sgith, dhèanadh i air an t-solus is bhristeadh ’na biorain i air cladh garbh an eilein.

Tha an caisteal air a thogail air bàrr creige a'irde agus rathad caol cunnartach a'dol suas na aodann na creige g' a ionnsaigh. Tha tòrr chlachan aig bonn an rathaid so agus their na bodaich ris Sac na Làire Bàine. Is ann le làir bhàinn a bhiodh an reubadair a' tarrainn suas aghaidh na creige na clachan leis an do thog é an caisteal. Ach an là bha so chuir e sac cho mòr air an làir 's gun do thuit i marbh fodha, 's tha na clachan na' an sud fhathast, tòrr air gach taobh de'n rathad mar chumhneachan air Sac na Làire Bàine.

Nuair a thog an reubadair an caisteal bha bean a dhith air, agus on bha nighean bhriagha aig Fear Bhaghasdail smaoineich e gun goideadh e i. Tharraing e air a mhùin i á Baghasdal gu Taobh a' Chaolais. Shnàmh e caolais Eirisgeidh leatha; tharraing e tarsaing Eirisgeidh i; shnàmh e Caolas an Staca leatha agus tharraing e às a' sin i chun a' chaisteil, agus mar a thuirnt am bodach a bha 'ga innseadh dhomh, gu dearbh cha robh cus an asgardh aige dhith.
Gaelic (Learners)

Ordinary Grade—(Paper (a))

AURAL COMPREHENSION TEST

Monday, 20th May—2.30 p.m. to 3.0 p.m.

Answers are to be written on the sheet provided for the purpose, on which are also to be written any notes made between the readings.

QUESTIONS

1. Where is the small island referred to, and what is the castle called? How did it get its name?  
   Marks 3

2. For what purpose did the owner of the castle light a fire on the seashore?  
   Marks 3

3. Tell where the castle was built and how it was approached.  
   Marks 2

4. Explain what is meant by "Sac na Làire Bàine." What happened to "An Làir Bhàn"?  
   Marks 4

5. Where did the wife of the owner of the castle come from? Describe the various stages of her journey to the castle.  
   Marks 3

(15)
1. Translate into English:—

Bha tigh Mairi Thormoid ris an rathad, agus an uair a chual i eigheach balaich dh’eirich i agus sheas i ris an uinneig. Bha balach beag a’ gabhail seachad, is e a’ cur dhachaidh na bà. Stad a’ bhò a chriomadh an fheoir ri oir an rathaid, agus chual i, ann an ciûneachd an fheasgar, am balach a’ fealla-dhà rithe, “Greas ort dhachaidh, is tu cho sona ri crodh an Taoibh Siar.”

An uair a bha am balach a mach á faire thill Mairi bho ’n uinneig is shuidh i ris air an stòl. “Ogha Choinnich Iain,“ ars ise rithe fhéin agus theann i ri cóimhead an teine. Shaoil leatha gun d’fhairich i lùths a h-òige a ris ’na corp, ag eirigh mar a dh’ éiréas snodhach§ anns a’ chraobh aig toiseach an earraich. Bha a falt cho bân, bachlagach, agus a sùilean cho lainnireach, ’s a bha iad air an t-samhradh sin, o chionn còrr is leth-cheud bliadhna, air àirigh an Cnoc na Caillich.

Is i bu shine de ’n teaghlach, agus bha iad air an àirigh còmhla ri a màthair, is a h-athair aig an iasgach. Is e samhradh an àigh a bh’ ann, blàth agus griannach, is bha a’ mhòinteach ’na làn àileachd. Chan iarradh i an còrr, ach am fraoch gorm, is i ’na laighe air, agus sàmhchar bho dhaoine, agus caithream na h-eunlaith o mhoch gu dubh.

§ snodhach = sap.

[ 50 ]
2. Read the poem below, then answer the questions which follow it:—

N.B.—The poem is NOT to be translated.

_Am Bruideargan_

A Bhruideargain, a Bhruideargain,
Gur duilich leam do sheol,
Ad sheasamh bonn na h-uinneige,
'S do chasan beaga reòt'.

5 Tha car ad cheann a' coimhead rium
'S do ghoban biorach, breòit'
Ag inns' gu bheil thu fannachadh—
Tha 'n t-acras 'ga do leòn.

O, fosgladh mise 'n uinneag dhuit,
10 Mun caill thu tur do threòir,
Is bheir mi sprùileach arain dhuit,
Tha pailteas air a' bhòrd.
Na biheadh fiann no eagal ort,
A eòin cin bhiog gun ghò,
15 Tha 'n tìgh gun chat gun chuilean ann,
'S cha leig mi duin' ad choir.

Nuair thig an t-Earrach lusanach,
Bidh tusa 'm bun nan cosy,
A' ceilearachd 's a' leannanachd—
20 Gur tu bhios air do dhòigh!
Ach nuair thig fuachd is gaillion ort
Is gainne air do lòn,
A sheòid, is math as aithne dhuit,
Có aig' tha 'm bonnach eòrn'!

**QUESTIONS**

The answers to the following questions may be in either Gaelic or English, except when otherwise indicated.

(1) What bird is addressed? Tell where it is, and why the writer is sympathetic towards it. What does the writer infer from its appearance?  
(2) In what ways is the writer going to befriend the bird? What reason does he give for his action? Show that he is able to be generous.  
(3) What assurances does he give the bird? Explain "gun ghò" (14)  
(4) Describe the bird's habits in the springtime.  
(5) Translate into English lines 21–24.  
(6) Write down the nominative singular of three diminutives used in the poem; and give the meaning of:—

   do sheòl (2), breòit' (6), do threòir (10)

   as used in the poem.

*Marks*
3. Translate into Gaelic:—

(1) When I was passing your house I saw your aunt standing at the window.
(2) From the top of the hill they could see many islands.
(3) Tell me how many inches are in a foot.
(4) He told us that the fisherman did not return home till daybreak.
(5) Duncan likes to play, but his older brother prefers to work hard.

4. Write, in Gaelic, a continuous story based on the following summary, and complete it in your own way. Give it a title.

Am an t-samhraidh—gabhail cuairt an cois a’ chladaich—chunnaic sinn geola bheag—dh’ fhuasgail sinn i—dh’ iomair sinn a mach gu muir—an toiseach chaidh gach ni gu math leinn, ach... 

OR

Write an essay on one of the following subjects:—

(a) Litir gu caraid no bana-charaid a’ toirt cuiridh làithean-saora a chur seachad comhla riut.

(b) Thoir cunntas air aon dhìubh so:
   am posta; an dotair; fear stiùridh a’ bhus; nighean na bùtha; ban-altruim an tìgh eiridinn.

(c) Nuair a dh’ fhàgas mi an sgoil.

Your composition should be from 150 to 200 words long.
Gaelic

Higher Grade—(First Paper (a))

Monday, 20th May—9.30 a.m. to 11.30 a.m.

Begin the answer (or fair copy of an answer) to each question on a fresh page.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question is shown in brackets after the question.

1. (a) Translate into idiomatic English:—

Fo an t-seann riaghladh cha robh na bochdan ro lionmhor agus bha iad air an cumail suas ann an tomhas de chomhfhurtachd freagarrach d' an inbhe le saor-thabhartaigh nan sgireachdan d' am buineadh iad fa leth. An àite a bhith air an cuibhreachadh mar phróiseachd an luchairtean móra, riomhach, cosdail, o 'n leth a muigh, ach lom, fuair o 'n leth a stigh, agus fo smachd 's fo riaghladh mhaignstirean agus mhnathan eirdridh aig nach eil ach ro bheag de chaomhhalachd no de chomhfhulanyas ri an laigsinnean, is ann a bha iad air an cumail suas gu bháth agus gu seasgair 'nam bothain féin. An sin bha an uireasbhuidhean air an leasachadh gu bunailteach le fialaidheachd thlusmhor an càirdean 's an luchd-eibhlaes, agus an t-airgiod a bha air a thionial o shàbaid gu sàbaid aig dorsan na h-eaglais air a roinn orra aig amaibh suidhichte. Cha bu cheum air ghàidh le bigridh na sgireachd obair latha no dhà a bhuiileachadh air buain, air caoineachadh, agus air giulain dachaideadh móine nam bochd, agus cha robh urram a dh' fhaoideachadh a’ bhàidh dh' an deanaidh ban-tuathanach barrachd uail na gum biodh e air a ràdh d’ a taobh “gun rohb beannachd nam bochd ’na cuideachd”. Ach air do 'n lagh úr tighinn a stigh—leis an rohb cis air a leagadh air uachdarain is tochdarain a réir an tighinn-a-stigh, 's a dh' fhumadh a bhith air a dioladh gun mheachainn gun dàil aig na tràitheadh suidhichte—cha b' fhada gus an d’rinn sud “am feumachna mi-thaingeil, 's an saobh Blair ne-shuairc.”

(25)
(b) Translate into idiomatic English:—

Bu ghradhnach dol a mach agus teachd a steach an righ chliùtich so, oir b' fhaRSAING agus bu thoirteil a shielbh; ach cha d' aisgin sin dha saorsainn o dhoilgheasan na beatha so. Mar dh' eirich do iomadh righ, roimhe agus 'na dheidh, b' anshocrach a cheann-adhairt. Air cho teòma agus gu'n tràmadh a luchd-seòbhair a chuasagan, air cho eagnaich agus gun caisliceadh iad a leabaidh, cha thàladh an deaslas tàmh do inntinn an righ. Cha bu luaithethe a rachadh e fo 'n aodach na thòisicheadh an suaineadh, an iorpaig agus an luasgan, gus am fàsadh na chuasagan dhà-san cho cruaidh, corraich ri bol fuar an tùrraidh agus an t-seid mar leacan daingeann a' chuaín. Mar sin do 'n righ ré na h-oídhche, air chòr agus an uair a dh' eircadh e sa' mhadainn nach bu shugradh a dhol 'na dhàil. Chan fhaiseadh e ni ceart mun cuairt dhà agus an saoghail mar gum b' eadh a leum air.

Rachadh iadsan a rinn a leabaidh a ghairm d' a ionnaigh agus, air dha an càineadh gu am brògan air son an cearbachd 'nan dreeuchd agus an dearmad air an dleasdanas, bhriseadh e air muinntearas le fraoch's le feirg. Bu shoirbh feadhainn eile fhaotainn a sheasadh 'nan àite, ach, ann am beachd an righ air an là màrach, mur b' iad sin a bu mhiosa, cha b' iad dad a b' fheàrr na iadsan do 'n tugadh cead an coise. Cha ghabhadh cluain a chur air an righ agus e a' stior-shireadh a' chadail a bha a ghnoth 'ga sheachdadh agus gach madainn a' meudachadh a fhronais agus a ghairge. Mu dheireadh thuras dithis mhnathan a rinn leabaidh cho min, tlath ri ceò na maidne samhraidh ann an gleannan fàsach ach, ged chaidh an righ iomhan agus am falach innte, bha i cho cruaidh leis-san agus a b' àbhaist, agus an cadaill air chall. (25)

2. Read the poem below, then answer the questions which follow it:—

N.B.—The poem is NOT to be translated.

Oran do Raonnall Og Mac Mhic Ailein

Mo chion na chunnaic mi 'm chadal,
Raonnall Og chaidh leinn do Shasgunn:
Marcach múinte nan steud brasa
Nach geàrr fead no srann san bhaiteal.

Gur toil leam an Còirneal sliosgheal
Do 'n tigeadh na h-airm gu sgiobaidh:
Claidheamh, gunna, sgiath is piostol,
'S éileadh cruinn an càradh sgìolt.

Leòmhann guineach calma luaineach,
Tuil-bheum sgrios-mharbhach sa' ruaig thu,
Beithir bheumannach 'n àm fuathais,
Phas a chòrs an colaith cruadail.

Fàth mo mhulaid bhith às t'aoisais;
Bu mhiann leam bhith faisinn t' aodainn

Thu gan stoirm, gun fhèath, gun fhaoileach:
Urla chruidh an uair nan caonnag.

Cha robh aileis ort ri gh' ràitinn
Anns a' chogadh ud Phrionns' Teàrlaich,
Thu gun mar-a-bhi gun fhàillinn

Mur bu bheag leinn t' fhiamh sna blàraibh.

Page two
Ghabh am Prionnsa cal’ ’nad dhùthaich,
Dh’ éirich thu leis le làn dùrachd,
’S nuair bhristeadh a ris air le bhiùthaidh*
Phill air n-ais gu t’ fhasga cliùteach.

25 Nach mi-fhortanach a’ chùis so,
Gun do dheilich** m’ éideadh cùil rium,
M’ éideadh-uchd, mo sgiath ’s mo lùireach,
Ann am Mùideart thug e chùl rium?

Ach car aon bhliadh an ni mi furas
30 Dh’ hìach am pill mo ghaol o thuras;
Ma thig esan gheibh mi cumail,
’S ni mi crìdeil, failteach fùireach.

* biùthaidh = laoich, armait
** dheilich = dhealaich

QUESTIONS

Notes to candidates

(a) The answers to the following questions may be in either Gaelic or English except when otherwise indicated.

(b) Arabic numerals within brackets refer to lines.

1. Tell briefly the central theme of this poem. 2

2. What compliment is paid to Raonall Og in lines 3–4? 2

3. Describe (a) his dress and his accoutrements, 2
   (b) his conduct in battle. 3

4. What references are made (a) to his character, 4
   (b) to his activities during the ’45?

   Explain the reference in line 21:
   “Ghabh am Prionnsa cal’ ’nad dhùthaich.”

5. What are the poet’s personal feelings for Raonall Og? 2

6. Comment on the imagery used in lines 9–10, and lines 26–27. 3

7. [TURN OVER]
7. Translate the following lines:

(a) Beithir bheumannach 'n àm fuathais (11)
(b) Urla chruaidh an uair nan caonnag (16)
(c) Thu gun mar-a-bhì gun fhàillinn (19)
   Mur bu bheag leinn t' fhiamh sna blàraibh (20)
(d) 'S nuair bhristeadh a ris air le bhiùthaidh (23)
(e) Ma thig esan gheibh mi cumail (31)

8. (a) Name six English loanwords in the poem giving the standard English forms also.

(b) Name from the first quatrain three Gaelic forms which are now practically obsolete.

(c) Suggest near-equivalents in Gaelic for mùinte (3), guineach (9).

9. Which quatrain in the passage makes the strongest appeal to you as poetry?
   Give some reasons for your choice.
SCOTTISH CERTIFICATE OF EDUCATION

GAELIC

Higher Grade—(First Paper (b))

AURAL COMPREHENSION TEST

Monday, 20th May—12 noon to 12.30 p.m.

This paper must not be seen by any candidate

INSTRUCTIONS TO THE TEACHER

1. Use the ten minutes preceding the beginning of the test to make yourself thoroughly familiar with the passage to be read.

2. When so instructed by the invigilator, read to the candidates the “Instructions to Candidates” given below.

3. Then read the passage aloud to the candidates, speaking clearly and naturally, and taking not more than four minutes to the reading.

4. After this reading inform the candidates that they may now turn over the printed question papers, and that they will have three minutes in which to study the questions. Remind the candidates that they may make notes during this interval of three minutes, but only on the sheets provided for the answers. You yourself will not be allowed to see the questions which are to be answered by the candidates.

5. When so instructed by the invigilator, read the passage a second time, in exactly the same manner as on the first occasion and taking the same amount of time.

6. Remind the candidates that the questions are to be answered in English.
INSTRUCTIONS TO CANDIDATES

1. Listen carefully to the following passage with a view to answering questions on its content.

2. The questions are to be answered in English.

3. You are on no account to touch the printed question paper or to do any writing until you are told to do so.

4. The procedure will be as follows:—

   (i) The passage will be read twice, with an interval of three minutes between the readings.

   (ii) After the first reading you will be allowed to turn over the printed question paper and you will have three minutes in which to study the questions.

   (iii) After the second reading you will write your answers on the sheet provided for this purpose.

5. All writing during the first and second readings is strictly forbidden. Notes may be made during the interval between the readings, but only on the sheet provided for the answers.

6. You may not ask for the repetition of any word or phrase.

Passage to be read to the candidates :—(Maximum time of reading—four minutes).

Sgeul Air Mac Raonaill Na Ceapaich

Bha Mac Raonaill na Ceapaich uair a muigh anns na garbh bheannaibh a tha cuartachadh na dùthcha sin air lorg fearbheannach, ach cha deach an là leotha 's thàinig e dhachaidh gun chalg. Is e bean mhor ghreannach, gun choibhneas gun fhoighidinn, a bh' aige agus nuair chunnaic i gu robh e falamh, thòisich i air le a teanga, oir bh'a mian mòr aic' air sithinn, agus chùm i 'g ràdh "abair sealgair, abair sealgair!" agus bhual i na coin gu cruaidh le cabar a bh' aice.

Dh' éirich an nàdur aige-san agus thubhairt e "Nam biodh thusa a h-uile ceum a rinn iad-san a dhéanamh an diugh, chan ann le bata a bhiodh e a' cur falt' ort." Chaidh an cèil air feadh na fídhe, agus an trod na bu bhraise gus mu dheireadh rug e air ghuaillean oirre 's thìgl e mach air an t-sìög i. Ghabh ise an t'amhlaithe gu h-olc, agus rèin i air tigh a h-athair, agus dh' innis ise a sgeul fhéin mar thachair, agus dhìult i tilleadh dhachaidh gu tigh a cèile-pòsda.

Bha a h-athair cho math air a' chlaidheimh ri duine a bha san tir, ach cha b' e Mac Raonaill dad bu lugha air an robh iomradh fear ngaiteach le claidheimh agus cha b' fhada gus na chuirt am bodach fios thuige e bhith deiseil airson coinneachadh ris-san gus an dèanadh e dioghaltas air airson mar laimhsich e an nighean aige-san.
Chaidh là agus uair a shuidheadachadh. Ghabh a’ chleasachd air adhart gu cruaidh gus na dheireadh thug am fear òg sgròbag fo smeagaid athar-céile. “An dèan sin a’ chuís dhot?” arsa Mac Raonaill. “Cha dèan gus an faigh mi dioghalta!” ars an seann duine, agus ghabh iad dha chéile rithist. Cha robh iad fad an sás gus an tug am fear òg an sgòbag ud dhà agus gheàrr e dhèth am putan a bha ceangal amhaich a lèine. “Is cinntheach gun déan sin a’ chuís dhot,” ars am fear òg. “Cha dèan, cùm ort,” ars am fear eile, agus ghabh iad dha chéile na bu naimhdeile agus na b’ fhiadhairche na bha iad roimhe, agus cha b’ fhada gus an tug am fear òg gearradh fada tarsainn a’ mhìonaisch aig an fhear eile, agus thuirt e agus nochd an fhuil. Leum an lighich dha chuidheadachadh. Chaidh an creuchd a cheangal suas, agus am bodach a thoirt gu cabhagach gu thith fhéin.

Chaidh òrdugh a mach bho an luchd lagha nach fhaodadh Mac Raonaill a dhol an côr athar-céile airson bliadhna agus là. Chaidh am bodach gu laighe na leapa, oir cha d’ rinn an creuchd an t-adhartas slànachaidh ris an robh dùil, agus bha e mar chleachdadh aige bhith coimhead a mach air an uilinnig gach là, agus a’ bagradh na dhèanadh e air an duine a rinn a’ chuis air leis a’ chlaidheamh. Bha Mac Raonaill air ceann a ghoithich aon là sa’ bhaile agus có a churinaic e ach athair-céile tromh an uinneig agus chaidh am bodach tromh a chéile. Dh’ éirich an fhéarr anns an inntinn aige agus rinn e airson éirigh a mach às an leabaidh, ach mo thuaighe! Shrac am fuairgeal a bha ann an craicinn mhionaich a’ bhodaich agus dh’ eug e mus d’ fhuair an lighiche thuige. Cha robh aig Mac Raonaill ach tairisinn às, oir ’s ann air a chaidh bàs athar-céile. Dh’ fhalbh e-fhèin còmha ri dìthic no thriùir eile ann an garbh-chriochan Siorrachd Rois an Iar, ach cha robh iad fada an sin nuair a bha tòrachd an lagha às an déidh, agus b’ fheudar sgapadh, agus thuairt fear na Ceapaich aiseag a null gus na Hearadh.
Gaelic/(Higher I (b))

1963

SCOTTISH CERTIFICATE OF EDUCATION

GAELIC

Higher Grade—(First Paper (b))

AURAL COMPREHENSION TEST

Monday, 20th May—12 noon to 12.30 p.m.

Answers are to be written on the sheet provided for the purpose, on which are also to be written any notes made between the readings.

QUESTIONS

1. About whom is the story told? Show that his hunting expedition had not been successful.

2. Describe his wife and tell why she was displeased. How did she show her displeasure?

3. Give the substance of her husband’s reply, and tell what was the outcome of their disagreement.

4. What was the father-in-law’s reaction?

5. Describe the duel which took place, and tell what the result was.

6. What eventually happened to the father-in-law?

7. As a result what was the son-in-law compelled to do?

Marks

2

3

2

2

2

2

(15)
SECTION I

1. Write, in Gaelic, an essay on any one of the following subjects:—
   (a) "Fàilte gu fearann air balaich an iasgaich."
   (b) Iomradh air cuirm-chhiuil no dealbh-chluich no film a fhrithcil thu, no air leabhar Gàidhlig a leugh thu.
   (c) Foighidinn nam ban—gus an cunntar tri.
   (d) Nach iomadh cothrom a th’ aig òigridh an là an diugh? (30)

2. Translate into Gaelic:—
   The old Highland sheep was a small, tan-faced animal, usually housed at night and carefully herded during the day from the eagle, the wild cat and the fox. Wolves were still to be found in Scotland in the early eighteenth century, the last being killed in 1743 on the lands of Mackintosh of Mackintosh near Inverness; but foxes were very common and the Disarming Acts were blamed for their great increase. In many places, the sheep were not so numerous as the goats, which were much hardier and were kept for their milk. The wool of the old Highland sheep was fine but very short and, instead of being shorn, was plucked by hand as it is today in Shetland. Descendants of the old breed were to be found in the twentieth century not only in Shetland, which is famous for its fine wool, but also in some of the remoter islands like St. Kilda, evacuated in 1930. It was about 1760 that Lowland sheep of the Blackface breed and the Cheviot breed were introduced into the glens of the Highlands, first near Callander and later in Cowal. (26)
SECTION II

Answer question (1) and any TWO of the others. The answers may be in Gaelic or in English.

(1) Of the following poets, which one strikes you as having the greatest range:—
Màiri Nighean Alasdair Ruaidh, Alasdair Mac Mhaighstir Alasdair, Rob Donn? Support your choice by giving a fairly detailed account of the poet’s subject-matter and style.

OR

Discuss the theme of either love of country or description of social conditions in the Gaelic poetry of the eighteenth and nineteenth centuries.

(2) “The essay is no longer a popular literary form in Gaelic”. Discuss this statement with reference to specific prose works of the nineteenth and twentieth centuries.

(3) Write brief notes on two of the following:—
The rise of the Clan Campbell; the Clearances; the Gaelic Census figures; the crofters’ struggle for security of tenure in the nineteenth century.

(4) Construct sentences using the following nouns in the genitive case:—
iuchair, lùdag, cearc-fhraoich, dreathan-donn; and the following in the dative case:—

bò, sgian, slat-thomhais, bean.

Add a note on the extent to which dative forms are used in your own dialect.

(5) Locate eight of the following, giving in each case the Anglicised equivalent:—
An Linne Sheileach, Allt Eireann, Cill Chuimein, Obar Pheallaidh, Inbhir Uige, Colhasa, Crombaigh, Bun Ilidh, A' Bhruaich, Baile Bhóid.
I (Ordinary I(a))

SCOTTISH CERTIFICATE OF EDUCATION

ITALIAN

Ordinary Grade—(First Paper (a))

AURAL COMPREHENSION TEST

Monday, 6th May—9.15 a.m. to 9.45 a.m.

This paper must not be seen by any candidate

INSTRUCTIONS TO THE TEACHER

1. Use the ten minutes preceding the beginning of the examination to make yourself thoroughly familiar with the passage to be read.

2. When so instructed by the Invigilator, read to the candidates the “Instructions to Candidates” given below.

3. Then read the passage aloud to the candidates, speaking clearly and naturally, and taking not more than four minutes to the reading.

4. After this reading inform the candidates that they will have three minutes in which to study the questions. You yourself will not be allowed to see the questions which are to be answered by the candidates.

5. When so instructed by the Invigilator, read the passage a second time, in exactly the same manner as on the first occasion and taking the same amount of time.

6. After the second reading you should leave the examination room.

INSTRUCTIONS TO CANDIDATES

1. Listen carefully to the following passage with a view to answering questions on its content.

2. The questions are to be answered in English.

3. The passage will be read twice, with an interval of three minutes between the readings.

4. No writing should be done while the passage is being read.

5. You may not ask for the repetition of any word or phrase.
Passage to be read to the candidates (maximum time of reading—four minutes).

Io e mia moglie avevamo detto al nostro bambino Carlo che saremmo andati a visitare la nonna e il nonno. Carlo aveva sei anni allora ed era contento di andare in treno. Io gli parlai a lungo per spiegare che il nonno era mio padre, e che io gli volevo bene come lui. Carlo ne voleva a me. Era contento di partire e credeva che io fossi un gran signore perché gli dissi che a casa dei nonni c'era il mare sotto la finestra, il mare che lui non aveva mai veduto. Era la prima volta che io gli parlavo di quella casa mia. Forse gli parve che io fossi un signore decaduto se ora che c'era lui avevamo davanti alla finestra solamente una strada nera e polverosa. Sua madre gli domandava se gli dispiacesse lasciarla, e lui diceva di sì, ma si capiva che non ne era sicuro. Noi invece volevamo che gli dispiacesse molto ed eravamo un po' tristi per noi.

Appena salito in treno, Carlo cercò un angolo per giocare, e una volta partiti io gli indicai gli ulivi e i contadini dal finestrino. Poi egli divenne triste e volle dormire. Prima di chiudere gli occhi, però, mi disse:

— Appena vedi il mare, svegliami.

Quando si destò era giorno chiaro e si precipitò al finestrino, dal quale si vedeva il mare, con delle navi alla linea dell'orizzonte, sospese tra mare e cielo. Io guardavo attentamente il mare e vidi che era scuro e denso; si muoveva appena.

— Quello è il mare — disse soltanto Carlo, e poi aggiunse: — Dobbiamo viaggiare ancora?

Credo che la gente che usciva dalle case sparse per i campi, e gli animali che servivano gli uomini gli facessero più impressione del mare.

Il treno entrava nella mia regione, e a me pareva che andasse più lento per permettermi di rivedere le cose che mi piacevano e che riconoscevo . . . .

Guardai Carlo e lui mi sembrava come un viaggiatore in paese straniero, che non capisce molte cose e disprezza molte altre. Io gli dissi:

— Questo è il mio paese. Qui si trovano molte cose belle con cui giocare.

Quando arrivavamo era già sera, la sera meridionale che si leva da tutte le cose. Carlo sfuggì dalle braccia dei nonni per correre subito lungo il mare. Il mondo gli pareva pieno di giocattoli naturali ed io vedevo che li scopriva subito come un tempo li avevo scoperti io. Eravamo ragazzi insieme.
SCOTTISH CERTIFICATE OF EDUCATION

ITALIAN

Ordinary Grade—(First Paper (a))

AURAL COMPREHENSION TEST

Monday, 6th May—9.15 a.m. to 9.45 a.m.

Answers are to be written on the sheet provided for the purpose, on which are also to be written any notes made between the readings.

QUESTIONS

1. Whom was Carlo going to visit, and with whom was he to travel?

2. How did Carlo feel about travelling by train, and about leaving his mother?

3. What did Carlo’s father say about the house they were going to visit, and why might Carlo have thought that his father had come down in the world?

4. What could Carlo see from the train window (a) at the beginning of the journey, and (b) when he woke up?

5. What interested Carlo most as he looked out of the train window?

6. What thoughts went through the mind of Carlo’s father as the train travelled through the district where he was born, and how did Carlo appear to him at that moment?

7. At what time of day did Carlo and his father reach their destination, and what did Carlo do as soon as they got there?
SCOTTISH CERTIFICATE OF EDUCATION

ITALIAN

Ordinary Grade—(First Paper (b))

Monday, 6th May—10 a.m. to 11.30 a.m.

Begin the answer (or fair copy of an answer) to each question on a fresh page.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question is shown in brackets after the question.
1. Read carefully the passage given below, then answer in English the questions which follow it.

The Beggar

Camminando lungo quella strada, vidi dietro la siepe una schiena curva d'uomo, coperta da un mantello grigio; e sulla schiena un cappello posato in modo che pareva non vi dovesse essere, tra cappello e mantello, una testa.

"Che roba è?" dissi fra me, e mi avvicinai. Al mio arrivo il cappello si voltò e fece muovere in basso una gran barba grigia: si, c'era una testa o almeno c'erano due occhi e c'era una gran bocca aperta al sorriso, che disse subito parole che non compresi, ma furono accompagnati da gesti czerberanti, che dissero: "Voi volete sapere che cosa faccio io qui? Ceno, signore. Questo che ho qui nella palma della mano sinistra è puro sale; questo che ho nella mano destra è il pane, che è formato di puro grano; quella che scorre in fondo al fosso, è la bevanda che è pura acqua. A tanta abbondanza e purezza io non posso avvicinare senza rendere grazie al Signore, come voi vedete"; e levatosi il cappello, scopri un piccolo cranio calvo e, deposto il pane, tirò fuori da una tasca un pesantissimo crocefisso appeso ad una grossa catena: lo guardò con occhio intenso come i pittori rappresentano i santi; lo baciò; quindi lo ripose nella tasca. "Ora è soddisfatta la vostra curiosità? Avete nulla a rimproverarmi? No? E seguito la mia cena."

Io allora mi sedei accanto a lui con senso umile e nuovo di fratellanza nel cuore. Quel sorriso, se non fosse stato un po' ebete, era degno di un verace filosofo.

Questo mendicante era una specie di mistico. Veniva dalla Spagna, era andato a Roma, poi a Bari, poi ad Assisi, poi a Loreto, ora andava a Venezia.

"E come fai a sapere la strada?"

"Domandando" — e poi sorridendo sempre mi mostrò la sua guida. Era una di quelle carte d'Italia che sono congiunte agli orari delle ferrovie.

QUESTIONS

(1) What idea do you get from this passage of the beggar's physical appearance?

(2) What is there in this passage to suggest that the beggar was satisfied with his supper? Why might he well have been dissatisfied?

(3) With reference to the text, show the author's attitude to the beggar:

(a) when he first caught sight of him;

(b) after the beggar had explained what he was doing.

(4) Where had the beggar come from? Where was he going? How did he propose to find his way?

(5) What do you think was the beggar's attitude to the author? Justify your conclusions.
2. Translate into English:

Un giorno, nei tempi in cui vivevo solo in campagna, dissi per caso a dei miei amici contadini che non mi sarebbe dispiaciuto avere un cane, per la compagnia. La mattina dopo mi portarono subito un cagnolino. Lo tenni qualche tempo, ma non mi piaceva; e non mi pareva intelligente. Perciò lo restituii a quelli che me l'avevano regalato, e non pensai più a cani.

Ma quando più tardi dovetti partire per Roma, quei buoni contadini, miei cari amici, a cui dispiaceva questa mia partenza, vollero lasciarmi un regalo che mi ricordasse che là c'era della brava gente che mi voleva bene. Si ricordarono di quel mio vecchio desiderio, che io avevo ormai dimenticato, e decisero di regalarmi un cane. Ma nessun altro cane era degno di me, se non il più famoso cane del villaggio, Barone, che apparteneva al fratello del barbiere. E così, con molte parole persuasive, riuscirono miracolosamente ad averlo con il permesso del suo padrone. Lo pulirono, lo lavarono, gli trovarono un bel collare, e me lo offerirono in dono, a ricordo eterno di quel buon villaggio, il giorno prima della mia partenza.
ITALIAN

Ordinary Grade—(Second Paper)

Monday, 6th May—2.15 p.m. to 3.45 p.m.

Begin the answer (or fair copy of an answer) to each question on a fresh page.

Marks may be deducted for writing that is difficult to read.

The value attached to each question is shown in brackets after the question.
1. Read the passage given below, then answer in Italian the questions which follow it.

   Passai quasi tutto un pomeriggio di pioggia a parlare con il medico che stava nel mio stesso albergo.

   Il medico, che avevo creduto solamente un turista, era invece un Italiano, emigrato in Francia più di trent’anni prima. Aveva combattuto nella prima guerra mondiale; e poi era andato in Francia a coltivare la terra insieme a tanti altri Italiani. Da allora, fino a pochi giorni prima, non era più tornato in Italia. . . .

   “Se lei sapesse che cosa è la nostalgia dell’Italia,” mi disse, dopo la seconda tazza di caffè. E poi aggiunse, “Abbiamo lavorato molto, e abbiamo guadagnato parecchio; tutto è andato bene. Ma lei non può imaginare che cosa sia il desiderio di comprare una casa nel paese dove si è nati, mandare i figli alla stessa scuola dove abbiamo studiato noi.” Il medico mi guardò, cercando di dominare la sua emozione. Avrebbe voluto dire ancora qualcosa; e invece si alzò in piedi, e dicendo “Buona sera”, uscì dalla sala.

   QUESTIONS

   Answer questions 1 to 8 in sentences, using the appropriate tense in each case.

   (1) Che tempo faceva quel pomeriggio?
   (2) Da quanto tempo il medico era in Italia?
   (3) Quali erano state le diverse occupazioni del medico?
   (4) Spiegate il significato di emigrato (line 3), pomeriggio (line 1), turista (line 3).
   (5) Fino a che punto il medico era contento della sua vita in Francia?
   (6) Esprimete in discorso indiretto (indirect speech) tutta la frase che comincia “Ma lei non può imaginare . . .” (Cominciate così: Il medico disse che . . .)
   (7) Esprimete con altre parole: (i) una guerra mondiale, (ii) la nostalgia dell’Italia, (iii) abbiamo guadagnato parecchio, (iv) tutto è andato bene.
   (8) Perché il medico sentiva tanta emozione?
   (9) Come si chiamano gli abitanti (a) della Francia, (b) della Scozia, (c) dell’Inghilterra?
2. Write, in Italian, a continuous story based on the following summary.

Your story should be from 150 to 200 words long. Use appropriate PAST tenses.

Durante la notte sentite dei rumori strani nella casa. Scendete a vedere. Gran paura. Si tratta del gatto che ha rovesciato qualcosa. (25)

OR

Write, in Italian, a letter to an uncle, thanking him for a gift of a bicycle and explaining how you propose to use it. (25)

Your letter should be from 150 to 200 words long. Where appropriate, use the perfect tense.
1. Translate carefully, with due attention to English form and expression:—

Da quando Ignazio, dopo la morte del padre, era entrato in possesso delle sue proprietà e si era trasferito a Firenze, Giovannino aveva ripreso la solita vita delle passeggiate in città e delle gite a Taormina, in attesa di qualcosa di grosso e di impreciso che sarebbe dovuto accadere. Aspettando questo importante e indistinto avvenimento egli non si impegnava in nulla, non voleva muovere un dito. I suoi ideali erano confusi. Faceva spesso dei vaghi sogni eroici nei quali egli aveva una parte trionfale. Sognava duelli non si sa con chi, duelli romantici dei quali avrebbe parlato tutta la città. Sognava onori che gli avrebbe tributato la cittadinanza per non si sa quali meriti. Indugiava nei particolari di queste scene dei suoi trionfi clamorosi ai quali partecipavano il sindaco e tutte le autorità cittadine. Lui veniva prelevato alla stazione, accompagnato con la musica fino all’albergo da dove, evocato dalle acclamazioni, era costretto ad affacciarsi al balcone per ringraziare. Non gli era necessario e non voleva precisare per quali benemerenze gli venivano tributati quegli onori. Tutto questo rimaneva avvolto nella nebbia. Il popolo festeggiava Giovannino Cali e basta.

Talvolta invece sognava di essere vittima di tremende ingiustizie. Tanto erano nere e crudele che alla fine il popolo commosso si sollevava in sua difesa; e Giovannino si perdeva in queste scene fino a ritrovarsi con le guance bagnate di lagrime sul divano dello studio del padre quando questi era uscito.

(30)
2. Carefully read the poem given below, then answer the questions which follow it.

The poem is NOT to be translated.

Fra Cugini

Io portavo il giubbino, Lena le vesti corte,
Lena era bionda e bella, ed io così così;
io maltrattavo il greco e Lena il pianoforte
e scrivevamo ancora ciliegia con due g.

Come tra i canti e i giochi la fiamma prematura
nell’anima tranquilla nata ci sia non so;
ci urtammo un dì correndo in una stanza oscura,
ed io l’amai quel giorno e Lena m’adorò.

O bel giardino ombroso! Cari mattin d’aprile
passati ai suoi ginocchi, muto, coi libri al piè,
a numerar le vene della sua man sottile,
sommesso come un paggio, superbo come un re!

Cara vestina azzurra sparsa di bianche stelle,
le tue mille pieghine come ricordo ancor,
e il fresco odor di bimba de le sue braccia belle,
e il lungo riccio d’oro che le pendea sul cor! . . .

Lena, e ricordi il giorno che coi parenti in guerra
sfogliando un vecchio atlante, pensosi di fuggir,
sedotti dal rosato color dell’Inghilterra,

in Inghilterra insieme giurammo di morir?

Lena ricordi ancora gli amanti di romanzo
che agli atti, ai detti, ai passi studiavamo d’imitar,
e i bocconi piccini che facevamo a pranzo
il vil pasto frugale fingendo di sprezzar?

Ricordi il dì che stanchi di pranzi a bocconcini,
affamati dal lungo digiuno dell’amor,
ci divorammo insieme quattordici panini
soffocando le risa che ci venian dal cor?

Così fra giochi e piani, carezze e giuramenti
un anno avventurato come un balen fuggì,
e noi felici, alteri, imbalzanzitì, ardenti
aspettando le nozze numeravamo i dì.

Ma un giorno, ah giorno! ad altri lidi un fatal Decreto
il babbo de la dolce fanciulla mia lanciò,
e la trama gentile del nostro amor secreto
in nome dell’Italia per sempre lacerò.
QUESTIONS

A. Answer in English:

(1) Suggest the approximate age of the poet and Lena at the time of the events narrated in this poem. Justify your estimate from the text. 4

(2) How, and in what circumstances, did the poet express his adoration of Lena? 4

(3) What idea do you get from the poem of Lena’s physical appearance? 3

(4) Why did the poet and Lena plan to run away? Where did they plan to go? Why? 3½

(5) What effect on the behaviour of the poet and Lena did their reading have? 5

(6) In what respect was this effect short-lived? Why? 3

(7) How long did this love idyll last? What brought it to an end? What had the poet and Lena hoped would happen? 3½

B. Answer in Italian:

(8) Spiegate il significato di “in nome dell’Italia” (line 36). 2

(9) Perché il poeta chiama il pranzo “vil pasto frugale” (line 24)? 2

(30)

3. Translate carefully, with due attention to English form and expression:

L’autobus delle dodici e trenta, che porta a Salerno attraverso l’autostrada Napoli-Pompei, quel giorno non era affollato. I passeggeri avevano trovato insoddisfacentemente posto, e alcune coppie di sedili della parte posteriore della vettura erano vuote.

Anche la giornata, che nelle prime ore era apparsa umida e nuvolosa, si era rischiarata, fino ad apparire sgombra di nubi, fresca, come un fiore delicato appena nato. In questa purezza d’aria è molto piacevole percorrere quei ventitré chilometri d’autostrada. Sembra di andare in un paesaggio dipinto da un fanciullo sotto un sole di cui si vedono distintamente i raggi, quale più lungo, quale più corto e tremolante. Gli ininterrotti campi, dalla terra così fertile e nera che sembra fangosa, sono pieni di contadini. Ogni contadino o gruppo di contadini sembra come in una fotografia, e la corsa dell’autobus li sorprende nel momento in cui alzano la vanga, nel momento in cui la ficcano nella terra, nel momento in cui il primo contadino chiama a gran voce un altro contadino che gli risponde.

Dinanzi a un siffatto paesaggio, aperto e quasi languido, nell’autobus invaso di luce i viaggiatori non riescono a leggere, né a pensare, né a distrarsi in un modo qualsiasi. Si abbandonano in quella dolce atmosfera tranquilla, godendosi passivamente la corsa, i colori, il caldo sole primaverile.

Page three
ITALIAN

Higher Grade—(Second Paper (a))

AUURAL COMPREHENSION TEST

Monday, 6th May—1.30 p.m. to 2 p.m.

This paper must not be seen by any candidate

INSTRUCTIONS TO THE TEACHER

1. Use the ten minutes preceding the beginning of the test to make yourself thoroughly familiar with the passage to be read.

2. When so instructed by the invigilator, read to the candidates the "Instructions to Candidates" given below.

3. Then read the passage aloud to the candidates, speaking clearly and naturally, and taking not more than four minutes to the reading.

4. After this reading inform the candidates that they may now turn over the printed question papers, and that they will have three minutes in which to study the questions. Remind the candidates that they may make notes during this interval of three minutes, but only on the sheets provided for the answers. You yourself will not be allowed to see the questions which are to be answered by the candidates.

5. When so instructed by the invigilator, read the passage a second time, in exactly the same manner as on the first occasion and taking the same amount of time.

6. Remind the candidates that the questions are to be answered in English.

INSTRUCTIONS TO CANDIDATES

1. Listen carefully to the following passage with a view to answering questions on its content.

2. The questions are to be answered in English.

3. You are on no account to touch the printed question paper or to do any writing until you are told to do so.
4. The procedure will be as follows:

(i) The passage will be read twice, with an interval of three minutes between the readings.

(ii) After the first reading you will be allowed to turn over the printed question paper, and you will have three minutes in which to study the questions.

(iii) After the second reading you will write your answers on the sheet provided for this purpose.

5. All writing during the first and second readings is strictly forbidden. Notes may be made during the interval between the readings, but only on the sheet provided for the answers.

6. You may not ask for the repetition of any word or phrase.

**Passage to be read to the candidates (maximum time of reading—four minutes.)**

Elena e Giorgio avevano prescelto Parigi per il loro viaggio di nozze, e presero stanza in un alberghetto non molto centrale; poiché, diceva lui, non erano poi milionari, e si poteva far miglior uso dei soldi che di regalarli ai proprietari dei grandi alberghi. Elena trovò che egli aveva tutte le ragioni, e si meravigliò assai della sua saggezza.

Davvero che egli sapeva molte cose! Sapeva i prezzi di tutto quello che si mangiava, e piombava dritto come un falco sul più piccolo errore in un conto. Guai al cameriere che distrattamente addizionasse coi franchi anche la data scritta in cima al conto. Per Elena era un momento di terrore quello in cui, nei risplendenti ristoranti, Giorgio toglieva dal piatto il conto accuratamente piegato e lo ispezionava lungamente, incurante del naso solenne del capo-cameriere che, ritto dietro a lui, gli guardava gii sarcasmticamente.

Elena notava anche che quando entravano in tali luoghi c'era subito un grande accorrere verso di loro, un aprire di porte con ossequiosi inchini, un additar di tavole con larghi gesti di braccio e di tovagliolo. Il cappello di Giorgio gli era preso dalle mam con deferente cura, e il mantello di Elena le veniva tolto e portato via con tenerezza riverente . . . . Ma quando, pagato il conto, si alzavano per andarsene, pareva che nessuno si ricordasse più della loro esistenza. Giorgio doveva andare a prendere il cappello da sè, e cercare il mantello di Elena, e anche aprire da solo le pesanti porte di vetro, poiché il portiere o non c'era, o guardava altrove, ridendo e scambiando occhiate d'intesa coi camerieri.

Anche con le vetture accadeva la stessa cosa. Sempre il vetturino che arrivava era tutto sorrisi e cortesia; e sempre il vetturino che partiva era tutto insulto e monologo ad altissima voce.

— Questa gente crede che perché siamo in viaggio di nozze dobbiamo essere idioti e pagar tutto il doppio — disse Giorgio. — Cara mia, il denaro è denaro. Elena, di fronte a quella frase, tacque; ma in fondo, tutto questo le faceva tristezza e vergogna, e avrebbe voluto partire, dimenticare tutte quelle cose e non ricordarsene mai più.
ITALIAN

Higher Grade—(Second Paper (a))

AURAL COMPREHENSION TEST

Monday, 6th May—1.30 p.m. to 2 p.m.

Answers are to be written on the sheet provided for the purpose, on which are also to be written any notes made between the readings.

QUESTIONS

(1) Why were Giorgio and Elena in Paris? Why didn’t they stay at a hotel in the centre of the city?  

(2) What signs of meanness were there in Giorgio’s behaviour in restaurants?  

(3) Describe the attitude of (a) Elena and (b) the head waiter in this situation.  

(4) What differences were there in the treatment which Giorgio and Elena received from the staff of a restaurant when they arrived and when they left?  

(5) What was the attitude of cab-drivers to Giorgio and Elena at the beginning and at the end of a journey?  

(6) What were Elena’s feelings on these occasions?  

Marks

2

1½

2

5

2½

2

(15)
Translate into Italian:

I mentioned before that having a strong desire to see the whole island, I had travelled up the stream until I could make out the sea in the distance. This time I decided to travel right across to the sea-shore on that side; and so, taking my gun, my dog and some biscuits, I set off on my journey. When I had passed the valley which I had visited before, I came in sight of the sea to the west, and since it was a clear day I could observe land, but I could not distinguish whether it was an island or a continent. At any rate it was very high and at a great distance. I reckoned that it could not be less than fifty or sixty miles away.

I could not tell what part of the world this was, though I knew it must be part of America, and must be near the Spanish dominions, and was perhaps entirely inhabited by savages; so that, if I were to land there, I would be in a worse situation than I was now; and I therefore accepted my destiny.

Besides, I realised that if this land was the Spanish coast, I was sure, at one time or another, to see some ship pass one way or the other.

With these considerations in my mind, I walked very slowly forward, and found that the side of the island which I had now reached was much pleasanter than mine: there were open fields, adorned with flowers and grass, and some very fine woods; and I saw many birds, and would have caught one if I could.

Write an essay in Italian on one of the following subjects:

Your essay should be from one to one-and-a-half times the length of the translation of question 1.

(a) Il Natale in famiglia.
(b) I vantaggi di una lingua internazionale.
(c) L’ultimo giorno dell’anno scolastico.
RUSSIAN

Ordinary Grade—(First Paper (a))

AURAL COMPREHENSION TEST

Thursday, 30th May—9.15 a.m. to 9.45 a.m.

This paper must not be seen by any candidate

INSTRUCTIONS TO THE TEACHER

1. Use the ten minutes preceding the beginning of the test to make yourself thoroughly familiar with the passage to be read.

2. (a) When so instructed by the Invigilator, read to the candidates the "Instructions to Candidates" given below.

   (b) Write on the blackboard the title of the passage to be read, which is "The Arithmetic Examination".

3. Then read the passage aloud to the candidates, speaking clearly and naturally, and taking not more than four minutes to the reading.

4. After this reading inform the candidates that they will have three minutes in which to study the questions. You yourself will not be allowed to see the questions which are to be answered by the candidates.

5. When so instructed by the Invigilator, read the passage a second time, in exactly the same manner as on the first occasion and taking the same amount of time.

6. After the second reading you should leave the examination room.
INSTRUCTIONS TO CANDIDATES

1. Listen carefully to the following passage with a view to answering questions on its content.

2. The questions are to be answered in English.

3. The passage will be read twice, with an interval of three minutes between the readings.

4. No writing should be done while the passage is being read.

5. You may not ask for the repetition of any word or phrase.

6. I am going to write on the blackboard the title of the passage, which is “The Arithmetic Examination”.

Passage to be read to the candidates (maximum time of reading—four minutes).

И вот мы снова в том же классе, где писали диктованку. Опять закрываются двери, отделяя нас от всего мира. Но теперь рядом со мной уж не Серёжка, а спокойный, неторопливый, голубоглазый мальчик. Имя его Константин.

В класс входит учитель — высокий с чёрной бородой. Все ребята срэзу же поднимаются с мест. Учитель кивает головой, разглядывает бороду и, постукивая мёлом, пишет на классной доске две задачи: одну для тех, кто сидит на лётах справа, другую для сидящих слева. Мне надо решать задачу, в которой слеdjет раздёлить яблоки между четырьмя братьями так, чтобы первому досталось больше, чем второму, второму больше, чем третьему, и так далее.

Разные задачи нам даются, должно быть, для того, чтобы мы не списывали у соседа по парте.

В первые минуты я ровно ничего не могу понять, хотя с домашним учительем не раз делал между братьями различные фрукты. Но тогда я решил такие задачи не торопясь, не волнуясь, а теперь особенно раздумывать некогда: пройдёт время и у тебя отберут тетрадь, решишь ли ты задачу или не решишь.

Page two
А тут ещё перед моей партой стоит этот чернобородый учитель, который так похож на генерала, портрет которого я видел в цветном календаре. Он улыбается в бороду, и всё же под его взглядом я ничего не могу вспомнить. Мой сосед по парте тоже, видимо, никак не может начать решать задачу. Он тяжело дышит, уши у него горят от волнения.

Наконец, учитель отходит от нашей парты и садится на кафедру. Я облегчённо вздыхаю и принимаюсь за дело, забыв и учитель, и соседей по парте, и быстро бегущее время. Наконец, мне как будто удаётся справиться с задачей: верно или неверно, а яблоки между братьями поделены. Все ребята в классе ещё сидят, низко наклонившись над своими тетрадями.

Меня охватывает тревога. Неужели я первым решил задачу? Уж нет ли гд-нибудь ошибки? А времени остаётся, должно быть, совсем немного. Я проверяю. Нет, как будто всё правильно — ответ получается тот же, что и в первый раз. Должно быть, верно! Смотрю, и у Константина лицо прояснилось, даже на губах появилась улыбка. Верно и он решил задачу.
RUSSIAN

Ordinary Grade—(First Paper (a))

AURAL COMPREHENSION TEST

Thursday, 30th May—9.15 a.m. to 9.45 a.m.

Answers are to be written on the sheet provided for the purpose, on which are also to be written any notes made between the readings.

QUESTIONS

1. Where did the incidents described by the author take place? Who was sitting next to the author, and what do we know about this person?

2. (a) What do we know about the teacher's appearance, and what did the pupils do when he entered the room?
   (b) What did the teacher write on the blackboard, and what precautions did he take against copying?
   (c) What was the question the author had to answer in the examination?

3. Why did the author find the question very difficult to start with?

4. (a) Where was the teacher standing at the beginning of the examination? Whom did the author think the teacher resembled, and where had the author seen this person before?
   (b) How did the author know that the pupil sitting next to him was having difficulties with his question?

5. When the author finished his question what were the other pupils doing? Why did this worry him?

6. (a) What did the author do with the remaining time and with what result?
   (b) When the author looked at his neighbour why did he conclude that he too had been successful in answering his question?

[Marks]
RUSSIAN

Ordinary Grade—(First Paper \((b)\))

Thursday, 30th May—10 a.m. to 11.30 a.m.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question is shown in the margin.
Карло жил в маленькой комнате под лестницей, где у него ничего не было, кроме красивого камина—в стене против двери.

Но красивый кamin и огонь в камине, и котелок, кипящий на огне, были не настоящие — нарисованы на куске старой материи.

Карло вошёл в маленькую комнату, сел на единственный стул у безногого стола и, поворотив так и этак кусок дерева, начал ножом вырезывать из него куклу.


Первым делом он вырезал на дереве волосы, потом — лоб, потом глаза.

Вдруг глаза сами раскрылись и посмотрели на него.

Карло испугался, но довольно ласково спросил:— Деревянные глазки, почему вы так странно смотрите на меня?

Но кукла молчала потому что у неё ещё не было рта. Карло выстругал щёки, потом выстругал обыкновенный нос. Вдруг нос сам начал вытягиваться, расти, и получился такой длинный, острый нос, что Карло вскликнул: — Нехорошо, длинен!

И начал срезать у носа кончик. Но нос вертелся, вывертывался, и остался очень длинным, острым носом. Карло начал вырезывать рот. Но только успел вырезать губы, и рот сразу открылся: — Хи-хи-хи, ха-ха-ха!

Карло сделал кукле подбородок, щёю, плечи, туловище, руки. Но едва он кончил выстругивать последний пальчик, Бурачийо начал бить Карло руками по голове.

— Послушай,— сказал Карло строго,— я ведь не кончил тебя мастерить, а ты уже начала баловаться. Что же дальше-то будет? А?

И он строго поглядел на Бурачийо. И Бурачийо круглыми глазами, как мышь, глядел на папу Карло.
QUESTIONS

(1) Describe Carlo’s room.

(2) Why did Carlo decide to call the doll Buratino?

(3) What happened after the top part of the head of the wooden doll was cut out?

(4) What did Carlo cut out next?

(5) What happened to Buratino’s nose?

(6) How did the doll behave towards Carlo when it was completed, and what reflections on Carlo’s part did this behaviour arouse?

2. Translate into English:

Эту историю мне рассказал инженер, недавно побывавший в западноевропейской стране.

В местном обществе дружбы с СССР, куда он был приглашен, его познакомили с симпатичной девушкой, хорошо владеющей русским языком.

Председатель общества сказал, что она может сопровождать инженера в качестве гида и переводчика.

Инженер и гид быстро подружились.

Девушка рассказала, что служит продавщицей, живёт с родителями, что отец работает на заводе, и что у неё ещё три сестры.

Уезжая, инженер решил сделать переводчице подарок; он взял с собой кой-какие сувениры. Позвонил девушке домой и договорился(1) о встрече.

Инженер явился в сквер, к месту свидания, на несколько минут раньше условленного времени.

Вокруг шла оживленная торговля цветами. Цветы были красивые — большие, яркие. Инженер не мог удержаться, купил гроцыйный букет и зашагал к аллее, где стоял всемирно известный памятник древнему поэту.

Page three

(1) договорился = made arrangements
Возле памятника он увидел свою переводчицу. Она стояла и быстро вязала букетики цветов, которые она продавала группе школьников.

Отступать было поздно — девушка его заметила.

Когда школьники убежали, инженер подошёл и смущённо передал ей букет. Она удивилась, обрадовалась. Сказала, что ещё никогда никто не дарил ей, цветочнице, цветов, что это первый букет в её жизни, что она только теперь поняла, как приятно получать в подарок цветы, хотя давно продаёт их. (20)

(2) смущённо = with embarrassment.
1963
SCOTTISH CERTIFICATE OF EDUCATION

RUSSIAN

Ordinary Grade—(Second Paper)

Thursday, 30th May—2.15 p.m. to 3.45 p.m.

Begin the answer (or fair copy of an answer) to each question on a fresh page.
Marks may be deducted for writing that is difficult to read.
The value attached to each question is shown in brackets after the question.
Однажды я зашёл по делам в секретариат Ленина. Вдруг слышим
из кабинета громкий смех Владимира Ильича. Через минуту оттуда
вылетела секретарша Лены, Наташа Лепешинская. После долгих
расспросов она рассказала, что произошло в кабинете.

Скульптор Альтман в то время лепил из глины(1) голову Ленина.
С согласия Владимира Ильича он работал в кабинете Ленина, но с
условием — не отрывать его от работы. В перерывах скульптура
покрывалась мокрой тряпкой(2), чтобы глина не сохла.

Уходя, Альтман попросил Ленина намочить вечером тряпку. Ленин
позвал Наташу, велел принести чайник холодной воды.

Наташа принесла воду. Ленин, не отрываясь от работы, сказал:
— Вылейте, пожалуйста, на мою голову.

Наташа с чайником в руках боязливо подошла к Владимиру
Ильичу — лить или не лить?

Ленин обернулся и засмеялся:
— Да не на эту, а вон на ту голову! — сказал он, показывая на
скульптуру.

(1) глина = clay. (2) мокрая тряпка = damp cloth.
QUESTIONS

Answer in sentences, using the appropriate tenses and aspects in each case.

(1) Кто выбежал из кабинета Ленина?
(2) Как имя и отчество Ленина?
(3) Что значит фраза, „чтобы глина не сохла“?
(4) Почему Ленин попросил Наташу принести холодной воды?
(5) Что хотела сделать Наташа с водой, которую она принесла?
(6) Объясните другими словами выражение „намочить тряпку“.
(7) Почему Ленин засмеялся?
(8) „Да не на эту, а вон на ту голову.“ Чьи это были головы?

2. Write, in Russian, a continuous story based on the following summary. Your story should be told in appropriate tense and be 150 to 200 words in length.

Два мальчика строят лодку. Летом они несут через весь город лодку к реке. Садятся в лодку. Лодка плывёт некоторое время, потом идёт ко дну.

OR

Write, in Russian, a letter to your friend who is staying abroad and describe how things are at home. Your letter should be from 150 to 200 words in length.
Begin the answer (or fair copy of an answer) to each question on a fresh page.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question is shown in brackets after the question.
1. Translate carefully, with due attention to English form and expression:—

(a) Я никогда не забуду, как однажды зимой я и мой старший брат ехали с отцом в поезде. На какой-то станции мы увидели за окном вагона старика в полушубке, продававшего пёстро и весело раскрашенные глиняные игрушки — лошадок, уток, петушков, человечков. Я сказал отцу, что мне очень нравятся такие лошадки. Ничего не ответив, отец схватил шапку и выбежал из вагона.

Но как раз в эту минуту продавец отошёл от нашего вагона. Отец бросился его догонять и тоже исчез.

Раздался третий звонок и поезд тронулся.

Мы так и замерли от ужаса. Что-то будет теперь с отцом, с нами?

Соседи по вагону стали успокаивать нас. Они говорили, что отец, наверное, успел вскочить в один из последних вагонов и скоро придёт к нам. Но он не пришёл.

Вот в вагон пришёл кондуктор и высадил меня и брата на какой-то станции. Здесь мы должны были ждать отца, который послал телеграмму с просьбой задержать нас. Мы сидели в буфете второго класса на жёстком диванчике и скучали. Пассажиры с нами разговаривали ласково и так жалостливо, что нам стало казаться, что мы навсегда останемся здесь на диване и никто за нами не приедет. И когда большая толстая женщина в шубе дала нам по булочке, я чуть не заплакал от жалости к себе.

Потянулись тоскливые часы ожидания. Нас клонило ко сну, но мы всячески боролись с дремотой, так как должны были сторожить отцовскую шубу, корзину, чемодан. В конце концов, я все-таки уснул, оставив на попечение брата шубу и наш багаж.

Только глубокой ночью приехал на станцию отец, взволнованный, растерянный, но с двумя глиняными лошадками в руках.
(b) Мы нашли место для купания, единственное, где можно было плавать. Мы полезли в воду, я немного поплывал у берега, стараясь не чувствовать под ногами дно. Это было трудно, потому что я его видел. День был солнечный. Я отплыл подальше и вдруг, повернув голову, понял, что я на середине реки. Теперь было уже всё равно, возвращаться или плыть вперёд,— Пашка крутился где-то поблизости и даже закричал: „Поплыл!“ — я впервые решил переплыть реку. Но на него было мало надежды, потому что еще сегодня он говорил, что для того, чтобы спасти утопающего, нужно его оглушить, ударив по голове веслом или камнем. Это было хуже, чем утонуть, и я плыл, стараясь не думать о том, что мне становится всё труднее двигать руками. Потом в середине груди остро закололо, так остро, что я с удовольствием совсем перестал бы дышать, если бы это было возможно. Я не перестал.

Но я решил, что всё-таки поплыву. Теперь больше всего на свете мне хотелось, вопреки Пашкиным наставлениям, почувствовать под ногами дно.

Я не утонул. Я вышел и рухнул на песок. Мне было всё равно, и я нисколько не гордился, что переплыл речку. Но мне захотелось, сам не знаю, засмеяться или заплакать, когда приплыл Пашка и сказал, что я всё-таки молодец.
2. Read the passage below, then answer the questions which follow it:—

The passage is NOT to be translated.

Довольно давно, больше десяти лет назад, я решил написать трудную, но как я тогда думал, да думаю и сейчас, интересную книгу.

Книга эта должна была состоять из биографий замечательных людей. Биографии должны были быть короткими и живописными.

Я начал даже составлять для этой книги список замечательных людей.

В эту книгу я решил вставить несколько жизнеописаний самых обыкновенных людей, с которыми я встречался,— людей безвестных, забытых, но мало, в сущности, уступавших тем людям, что стали известными и любимыми. Просто им не повезло и они не смогли оставить после себя хотя бы слабый след в памяти потомков. Большей частью это были подвижники(1), охваченные какой-нибудь единой страстью.

Среди них был речной капитан Оленин-Волгарь. Он вырос в музыкальной семье и учился пению в Италии. Но ему захотелось обойти пешком всю Европу, он бросил учение и действительно обошел Италию, Испанию, Францию, как уличный певец. В каждой стране он пел под гитару песни на её родном языке.

Я познакомился с Олениным-Волгарём в 1924 году в редакции одной из московских газет. Однажды после работы мы попросили Оленина-Волгаря спеть нам несколько песенок из его уличного репертуара. Достали где-то гитару, и худой невысокий старик в форме речного капитана вдруг преобразился в виртуоза, в удивительного актёра и певца. Голос у него был совершенно молодой.

После скитаний по Европе, Оленин-Волгарь работал матросом на морских пароходах, выдержал экзамен на штурмана дальнего плавания, прошёл много раз вдоль и поперёк Средиземное море, потом вернулся в Россию и служил капитаном на Волге. В то время, когда я познакомился с ним, он водил пассажирские пароходы из Москвы в Нижний Новгород.
Он первый за свой страх и риск провёл через узкие и ветхие московорецкие шлюзы(2) большой волжский пассажирский пароход. Все капитаны и инженеры уверяли, что это невозможно.

Он первый предложил выпрямить русло(3) Москвы-реки.

Оленин-Волгарь написал много превосходных статей о реках России. Теперь эти статьи потеряны и забыты.

В свободное время он переводил на русский язык „Божественную комедию“ Данте.

Это был строгий, добрый и беспокойный человек, считавший, что все профессии одинаково почётны, потому что служат делу народа и дают каждому возможность проявить себя „хорошим человеком на этой хорошей земле“.

(1) подвижник: zealot, ascetic.
2) шлюз: sluice, lock.
(3) русло: bed.

QUESTIONS

A. Answer in English:—

(1) What two classes of people did the author intend to include in his projected book? 5
(2) What do we know of Olenin-Volgar’s upbringing and education, and of the immediate use to which he put this education? 5
(3) What were the respective occupations of the author and Olenin-Volgar when they first met, and what statement in the text suggests a reason for this first meeting? 2
(4) Where did Olenin-Volgar see service as a sailor, what steps did he take to merit promotion, and where did he serve as a ship’s captain? 3½
(5) The text states that Olenin-Volgar was „строгий, добрый, и беспокойный человек“ . This apart, what qualities and achievements revealed by Olenin-Volgar’s career merit his inclusion in the author’s proposed book? 7½

B. Answer in Russian:—

(6) Объясните другими словами выражения „речной капитан“ и „уличный певец“.

(7) Каким языком, кроме русского, владел Оленин-Волгарь, и почему вы так думаете? 3

(30)
RUSSIAN

Higher Grade—(Second Paper (a) )

AURAL COMPREHENSION TEST

Thursday, 30th May—1.30 p.m. to 2 p.m.

This paper must not be seen by any candidate

INSTRUCTIONS TO THE TEACHER

1. Use the ten minutes preceding the beginning of the test to make yourself thoroughly familiar with the passage to be read.

2. When so instructed by the Invigilator, read to the candidates the "Instructions to Candidates" given below.

3. Then read the passage aloud to the candidates, speaking clearly and naturally, and taking not more than four minutes to the reading.

4. After this reading inform the candidates that they will have three minutes in which to study the questions. You yourself will not be allowed to see the questions which are to be answered by the candidates.

5. When so instructed by the Invigilator, read the passage a second time, in exactly the same manner as on the first occasion and taking the same amount of time.

6. After the second reading you should leave the examination room.
INSTRUCTIONS TO CANDIDATES

1. Listen carefully to the following passage with a view to answering questions on its content.

2. The questions are to be answered in English.

3. The passage will be read twice, with an interval of three minutes between the readings.

4. No writing should be done while the passage is being read.

5. You may not ask for the repetition of any word or phrase.

Passage to be read to the candidates (maximum time of reading—four minutes).

Молодая чёрная собачка, которую звали Каштанкой, бегала взад и вперёд по тротуару и беспокойно оглядывалась по сторонам. Ёршечка она останавливалась и, плача, приподнимая то одну холодную лапу, то другую, старалась объяснить себе: как это могло случиться, что она заблудилась?

Она отлично помнила, как она провела день и как, в конце концов, попала на этот незнакомый тротуар.

День начался с того, что её хозяйин, столляр Лука Александрович, надел шляпку, взял какую-то деревянную штук, завёрнутую в красный платок, и крякнул:

--- Каштанка, пойдём!

Услышав своё имя, собачка потянулась и побежала за хозяином. Каштанка помнила, что по дороге она вела себя крайне неприлично. От радости, что её взяли гулять, она прыгала, забегала во двор и гонялась за кошками. Столляр то-и-дело терял её из виду, останавливаясь и сердито кричал на неё.
Вдруг загремела музыка. Каштанка увидела, что по улице прямо на неё шёл полк солдат. Не выносит музыки, которая расстраивала её нервы, она легла и залаяла. К величкому её удивлению, столляр, вместо того, чтобы испугаться, убежать, широко улыбнулся, втянулся и стал слушать. Видя, что хозяин не преступает, Каштанка еще громче залаяла и бросилась через дорогу на другой тротуар.

Когда она пришла в себя, музыка уже не играла и солдат не было. Она перебежала дорогу к тому месту, где оставила хозяина, но увы! столляр уже там не было. Она бросилась вперёд, потом назад, ещё раз перебежала дорогу, но столляр точно сквозь землю провалился. Каштанка стала обнюхивать тротуар, надеясь найти хозяина по запаху его следов, но раньше какой-то человек прошёл в новых галошах и теперь все запахи смешались, так что ничего нельзя было разобрать.

Каштанка бегала взад и вперёд и не находила хозяина, а между тем становилось темно. По обе стороны улицы зажглись фонари и в окнах домов показались огни.

Когда стало совсем темно, Каштанкою овладели отчаяние и ужас. Она прижалась к какому-то подъезду и стала горько плакать. Она не знала, куда идти, где найти своего хозяина.
RUSSIAN

Higher Grade—(Second Paper (a))

AUERAL COMPREHENSION TEST

Thursday, 30th May—1.30 p.m. to 2 p.m.

Answers are to be written on the sheet provided for the purpose, on which are also to be written any notes made between the readings.

QUESTIONS

1. At the beginning of the story what was the dog doing which suggested that she was in distress? 2

2. What was her master’s occupation, and what was he carrying when he left the house with Kashtanka? 3

3. In what ways did Kashtanka behave badly in the street? 1½

4. What did Kashtanka suddenly hear and what were her reactions? What were her master’s reactions? How did Kashtanka escape from the cause of her annoyance? 3

5. How did Kashtanka attempt to find her master again? What made it difficult for her to pick up his trail? 2½

6. What details at the end of the story make it clear that it was becoming dark? What actions on Kashtanka’s part show that she was frightened? 3 (15)
Begin the answer (or fair copy of an answer) to each question on a fresh page.

Marks may be deducted for writing that is difficult to read.

The value attached to each question is shown in brackets after the question.

1. Translate into Russian:

He had long wanted to make her acquaintance, and he knew that she lived in a flat on the second floor of the house next door. He also knew that she went shopping on Thursdays. Therefore, the next Thursday evening when she passed his window, he snatched up his cap and ran into the street. What was he to do? He could only follow her. Fortunately this was easy, because there were not many pedestrians and the summer evenings were long and clear.

She went into the nearest store, and after looking at some silk dresses she stood in a queue to buy shoes. She must have tried on six pairs before she left the shop and turned for home. But suddenly she disappeared into a dairy. He saw her through the window buying an egg, a beautiful brown egg, which she picked from the basket with great care. As soon as she left the dairy he went in. In a moment he was out again, and he started to follow her across the empty square towards the house where she had her flat. Through her door he crept and up the stairs. At last she stopped to take her key out of her pocket.

Blushing he said, "Excuse me, you dropped this," and he handed her—an egg.

(1) to try on = примерять, примерить
(2) dairy = молочная

([50])
2. Write an essay on one of the following themes:—

    Your essay should be from one to one-and-a-half times the length of the translation of question 1.

(a) Moя любимая книга.

(b) Кем я хочу быть и почему.

(c) Театр, кино или телевидение — what you prefer and why?

Marks

(C41518)
SPANISH

Ordinary Grade—(First Paper (a))

AURAL COMPREHENSION TEST

Wednesday, 29th May—9.15 a.m. to 9.45 a.m.

This paper must not be seen by any candidate.

INSTRUCTIONS TO THE TEACHER

1. Use the ten minutes preceding the beginning of the examination to make yourself thoroughly familiar with the passage to be read.

2. When so instructed by the Invigilator, read to the candidates the "Instructions to Candidates" given below.

3. Then read the passage aloud to the candidates, speaking clearly and naturally, and taking not more than four minutes to the reading.

4. After this reading inform the candidates that they will have three minutes in which to study the questions. You yourself will not be allowed to see the questions which are to be answered by the candidates.

5. When so instructed by the Invigilator, read the passage a second time, in exactly the same manner as on the first occasion and taking the same amount of time.

6. After the second reading you should leave the examination room.

INSTRUCTIONS TO CANDIDATES

1. Listen carefully to the following passage with a view to answering questions on its content.

2. The questions are to be answered in English.

3. The passage will be read twice, with an interval of three minutes between the readings.

4. No writing should be done while the passage is being read.

5. You may not ask for the repetition of any word or phrase.
Passage to be read to the candidates—(maximum time of reading—four minutes).

Alvarito goes to boarding-school.

Una mañana, a primeros de otoño, el padre de Alvarito, quien era médico del pueblo de la Mata, metió a su hijo en el automóvil y le llevó a Madrid. Dejó al muchacho con los abuelos que vivían en una casa inmensa en las afueras de la ciudad.

Los primeros días que Alvarito pasó en Madrid fueron bastante divertidos. Cada tarde se iba de compras con la abuela y, antes de volver a casa, merendaban en una pastelería. Pero al fin, un día, el abuelo le llevó al colegio.

El colegio era un gran edificio, en el que cientos de niños, todos de uniforme, vivían esclavos de una campana, que tocaba a horas fijas durante el día, arreglando todas las idas y venidas de los pensionistas. Allí llevaba Alvarito una vida monótona que sólo se interrumpía los sábados por la tarde, cuando los abuelos iban a recogerle para que pasase con ellos el fin de la semana. Le llevaban a Alvarito a la gran casa, donde cenaban ampliamente y se acostaban temprano. A la mañana siguiente, después de haber ido a la misa, visitaban juntos el jardín zoológico, a ver las fieras, o se paseaban en el Parque del Retiro. Después de la comida, el abuelo tenía la costumbre de echar una siesta, mientras la abuela se ponía a coser junto a la mesa en el salón. Alvarito, sentado en el sofá, leía distraídamente unas viejas revistas. A las cinco en punto, merendaban en el comedor, y luego volvían al salón, donde se pasaba el resto del día.

Los lunes volvía Alvarito al colegio. De vez en cuando sus padres le visitaban a media semana durante el recreo de la tarde. Entonces le contaban que en su pueblo natal sus amigos habían preguntado por él y le enviaban saludos. A la media hora sonaba la campana y los padres tenían que irse. Parado ante la puerta, Alvarito les despedía agitando el pañuelo sobre su cabeza.
SPANISH

Ordinary Grade—(First Paper (a))

AURAL COMPREHENSION TEST

Wednesday, 29th May—9.15 a.m. to 9.45 a.m.

Answers are to be written on the sheet provided for the purpose, on which are also to be written any notes made between the readings.

QUESTIONS

(1) How did Alvarito get to Madrid?
   What time of the year was it when he made this journey?

(2) Whereabouts in Madrid did Alvarito spend his first few days?
   How did he spend this time?

(3) Describe the school, the boys, and the life they led.

(4) What happened on Saturdays?

(5) What happened on Sundays?

(6) When did Alvarito’s parents visit him?
   What did they have to say to him?

(15)
SPANISH

Ordinary Grade—(First Paper (b))

Wednesday, 29th May—10.0 a.m. to 11.30 a.m.

Begin the answer (or fair copy of an answer) to each question on a fresh page.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question is shown in brackets after the question.
1. Read carefully the passage below, then answer in English the questions which follow it.

The passage is NOT to be translated.

*El Valle*

El valle significaba mucho para Pedro. Allí había nacido y, en once años, jamás atravesó la cadena de altas montañas que lo rodeaban. Ni experimentó la necesidad de hacerlo siquiera.

A veces Pedro pensaba que su padre, y el cura, y el maestro tenían razón, cuando afirmaban que su valle era como una gran hoya, absolutamente aislada del mundo exterior. Y, sin embargo, no era así; el ferrocarril y la carretera atravesaban el valle de sur a norte, proviniendo de la parda y seca llanura de Castilla y buscando la orilla del mar azul. En su trayecto por el valle, el ferrocarril, la carretera, y el río—que se unía a ellos después de lanzarse en un frenesi de rápidos y torrentes desde lo alto del Pico Rando—se entre cruzaban una y mil veces, formando una serie de puentes, túneles, pasos a nivel y viaductos.

En primavera, Pedro solía salir del pueblo para sentarse, al caer la tarde, en cualquier leve prominencia, y desde allí contemplaba la quietud serena del valle. Muchas veces, ante la inmovilidad y el silencio de la naturaleza, perdía el sentido del tiempo, y la noche se le echaba encima sin que notase la hora. Pero al salir las estrellas en el cielo obscurecido, Pedro regresaba apresuradamente al pueblo, porque le daba miedo la inmensidad del firmamento.

En el verano estallaban tormentas frecuentemente en el valle, las cuales no podían escapar de la prisión que formaban los montes. En ocasiones, no cesaba de tronar en tres días consecutivos. En otoño, cuando llovía mucho, el valle se transformaba; entonces tenían las montañas un aspecto sombrío y triste, mientras los prados se destacaban verdes y relucientes.

Pero, en la opinión de Pedro, era en el invierno, durante las grandes nevadas de Navidad cuando el valle mostraba su semblante más característico. En aquel tiempo, este valle suyo le parecía melancólico, apartado del resto del mundo, y le agradecía verlo protegido por su amparo de nieve.

*Page two*
QUESTIONS

1. Why was Peter so attached to the valley?

2. “—su valle era como una gran hoya, absolutamente aislada del mundo exterior—”. (line 5)
   (a) What does this statement mean?
   (b) What persons made this statement?
   Did Peter agree with them?
   (c) What geographical facts mentioned in the second paragraph disprove this statement?
   (d) Describe the course of the river mentioned.

3. The valley changed its appearance according to the season of the year.
   What description does the author give of the valley (its moods and appearance) in each of the four seasons?

4. What was Peter in the habit of doing in spring?
   Show how the effect which nature had on his mind and on his actions changed according to the time of day.
   Explain these changes.

5. Why was Peter specially pleased with the valley in winter?

2. Translate into English:

   Unexpected Encouragement

   Una mañana que mi amo bajó a la tienda más temprano de lo que tenía por costumbre, me sorprendió leyendo.
   —¿Qué haces ahí?—preguntó encolerizado.
   Yo, confuso, oculté el libro detrás de mí.
   —A ver, dámelo.
   Se puso a ojearlo con calma, como si estuviera tomandose tiempo para reflexionar. Luego me miró con unos ojos vivos.
   —¿Te gusta esto?
   —Sí, señor.
   —Perteneció a mi padre; era médico. ¡Ah! si yo le hubiera hecho caso—
   Se quedó unos instantes pensativo.
   —Vamos, hay que abrir la tienda—dijo bruscamente.
   Por entonces no se habló más del asunto. Pero dos o tres días más tarde, el amo me preguntó:
   —¿A ti te gustaría estudiar?
   —Sí, señor—repuse con una determinación que aun hoy me sorprende.
   Estoy seguro de que esta idea jamás había cruzado por mi mente.
   —Bueno, vas a empezar tus estudios en seguida. Desde mañana te guardarás las propinas. Así podrás pagar tus gastos y adquirir los libros que necesites—terminó con un suspiro.
   —Sí, señor—dijo con entusiasmo.
   —Vete a ver mañana a don Teodoro. Creo que el podrá darte algunas lecciones.

Page three
SPANISH

Ordinary Grade—(Second Paper)

Wednesday, 29th May—2.15 p.m. to 3.45 p.m.

Begin the answer (or fair copy of an answer) to each question on a fresh page.

Marks may be deducted for writing that is difficult to read.

The value attached to each question is shown in brackets after the question.
1. Read the passage given below, then answer in Spanish the questions which follow it.

Un madrileño, que regresaba de Barcelona a Madrid en el mismo departamento que un catalán, le preguntó a éste la hora. El catalán interrumpió su lectura, levantó los ojos hacia el madrileño y respondió: "Usted me pregunta la hora sencillamente para iniciar conversación conmigo. Después de charlar un rato no tardaremos en hacernos amigos. Cuando lleguemos a Madrid, usted me invitará a tomar el aperitivo. Por mi parte, voy a verme obligado a invitarle a visitarme en Barcelona. Allí le presentaré a mi única hija que es una chica muy atractiva. Estás seguro de volver a vernos muchas veces. Dentro de poco usted me pedirá la mano de mi hija (aquí el catalán se puso furioso) y usted cree que voy a conceder la mano de mi hija a un hombre que no ha podido comprarse un reloj para saber la hora que es"!

QUESTIONS

Answer questions 1 to 8 in sentences, using appropriate tenses in each case.

(1) ¿Qué es un departamento?
(2) ¿Qué hacía el catalán, cuando le interrumpió el madrileño?
(3) ¿Por qué habló el madrileño?
(4) Expresa en otras palabras:
   (a) "—no tardaremos en hacernos amigos." (líneas 4-5).
   (b) "—voy a verme obligado a invitarle—" (línea 6).
(5) ¿Cuántas hijas tenía el catalán? ¿Cómo lo sabe usted?
(6) ¿Por qué se puso furioso el catalán, en la opinión de usted?
(7) ¿Qué quiere decir "charlar"? (línea 4).
(8) ¿Para qué sirve un reloj? ¿Qué hora es en este momento?
(9) Cambie los verbos siguientes al tiempo presente:
   interrumpió, levantó, presentaré, pedirá, se puso, ha podido.
(10) Expresa en otros términos:
   "—un rato—" (línea 4).
   "—una chica muy atractiva—" (línea 7).
   "—volver a vernos—" (línea 7).
2. Write, in Spanish, a continuous story based on the following summary.

**Your story should be from 150 to 200 words long. Use appropriate PAST tenses.**

Después de muchos años en América, un español vuelve a España en busca de su hermana. Descubre que ella también ha emigrado y que vive en la misma ciudad americana que él!

**OR**

Write, in Spanish, a letter to a pen-friend, telling how you were asked to help neighbours who had employed a Spanish maid-servant who spoke no English. Describe how you explained to her the things she would find different: the times of meals, the food, the shopping, etc.

Your letter should be from 150 to 200 words long.
SPANISH

Higher Grade—(First Paper)

Wednesday, 29th May—10.0 a.m. to 12.15 p.m.

Begin the answer (or fair copy of an answer) to each question on a fresh page.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question is shown in brackets after the question.
1. Translate carefully, with due attention to English form and expression:—

El avión descendía rápidamente hacia el mar. Cada vez se percibían mejor las crestas de espuma sobre las olas verdes. En la memoria de Miguel surgió el recuerdo del accidente sobrevenido un año antes en aquel mismo lugar. El aparato se había hundido en el Báltico, cerca de la costa, y a los dos días fue hallado con todos los pasajeros y tripulantes en la cabina inundada. Al recordarlo, pensó que su mujer habría estado angustiada todo el día, obsesionada por la misma idea. Pues fue un accidente sensacional, ya que el avión inauguraba una nueva línea y llevaba personalidades a bordo.

De pronto empezó el avión a virar, inclinándose fuertemente a un lado. Miguel distinguió, no muy lejos, las torres y edificios de una gran ciudad gris: Copenhague. Fue sólo un instante, porque el avión volvió a enderezarse. Y entonces, a pocos metros ya del agua, apareció la orilla, donde comenzaban las pistas del aeropuerto. Las ruedas tocaron el suelo y, al fin, el aparato se detuvo y se abrió la puerta. En la fila de pasajeros, Miguel descendió la escalera metálica y pisó por primera vez tierra escandinava.

¡Qué húmedo el aire! Al detenerse para tragar saliva y aliviarse el zumbido de los oídos, le extrañó ver a las gaviotas andar sobre el cemento y posarse en los alambres de las señales eléctricas. Pero pensó que debía ser natural en aquel mundo de mar y tierra confundidos.

2. Carefully read the passage given below, then answer the questions which follow it.

The passage is NOT to be translated.

Los árboles tienen sus luchas. Los mayores asombran a los pequeños, que crecen entonces con prisa para hacerse pronto dueños de su ración de sol, y, al esperar las raíces bajo la tierra, hay algunos quizá demasiado codiciosos que estorban a los demás en su legítimo empeño de alimentarse. Pero entre todos los seres vivos del bosque son los más pacíficos, los más bondadosos, los que poseen un alma más sencilla e ingenua. Conviene saber que carecen absolutamente de vanidad. Nacen en cualquier parte e ignoran que sólo por el hecho de crecer ellos allí, aquel lugar queda embellecido. No se aburren como los hombres, porque no miran a la tierra, sino al cielo, y el cielo cambia tanto, según las horas y según las nubes, que jamás es igual a sí mismo. Cuando los hombres buscan la diversidad, viajan. Los árboles satisfacen ese afán sin moverse, pues es la diversidad la que pasa incesantemente sobre sus copas.

En verdad, ellos mismos son la diversidad. Según avanzamos por un bosque, la alineación de sus árboles, el perfil del ramaje, el mosaico de las hojas, todo esto cambia, y el panorama se renueva constantemente con perspectivas en que las formas se diversifican en modos infinitos, como los hombres no han acertado a conseguir ni en el más complicado y variado de los bailes. Si los troncos son rectos, nos impresiona su esbelta; si torcidos y atormentados, no deja de haber en ellos una belleza tosca, algo que los humaniza ante nuestros ojos.

La Desgracia—que recorre todos los caminos del mundo—pone a veces sus lentos pies en los senderos del bosque. Es cuando acuden los leñadores con sus hachas de largo
mango, o cuando el furioso vendaval(2) apoya su espalda en el espeso follaje y empuja, hasta sentir el crujido mortal del tronco, o cuando el ascua echada de una locomotora hace nacer entre la hierba seca una lengüecilla roja que después se multiplica y crece y corre y se eleva, hasta quemar las ramas que se retuerzen y chisporrotean y se abaten. Pero todo esto es infrecuente, y la calma feliz es la habitual moradora del bosque.

(1) asombrar = cubrir de sombra.
(2) vendaval = viento fuerte que sopla del sudoeste.

QUESTIONS

A. Answer in English:—

(1) In the first paragraph the author makes the following statements:—

" Los árboles tienen sus luchas " (line 1).
" — entre todos los seres vivos del bosque son los más pacíficos — " (lines 4-5).
(a) What do these statements mean and to what extent are they contradictory?
(b) What examples does the author give to prove the first statement?
(c) In the author's opinion, what qualities do trees possess which are in keeping with the second statement?

(2) " — carecen absolutamente de vanidad. " (line 6).
In this statement what human quality does the author attribute to trees and how does he try to prove that he is right?

(3) How do trees differ from men in their attitude to variety in life?
How does the author explain this difference in the first paragraph?

(4) The theme of variety is further developed in the second paragraph.
How does the author try to prove that trees are superior to men in the variety they offer? (Give details).

(5) In the second paragraph the author also mentions two attractive qualities in trees.
What are these qualities, to what does he attribute each one, and what effect does each one have on human beings, in his opinion?

(6) What three misfortunes may befall the forest? What is the source of the damage and how exactly does it come about in each case?

B. Answer in Spanish:—

(7) Explique lo que significa " codicioso " (línea 3).


(PLEASE TURN OVER)
3. Translate carefully, with due attention to English form and expression:—

— Ciudadanos: El grito de libertad dado en Cádiz resuena ya en todos los ámbitos de la península. Estad orgullosos, ciudadanos, estad orgullosos de llamaros españoles; el sol de la libertad ha roto al fin la niebla de la tiranía que le tuvo empañado largos siglos, y aparece más esplendoroso que nunca, pronto a borrar las huellas desgraciadas de una raza funesta y falsa — — —.

Estos y otros discursos muy semejantes gritaba el Marroquín desde uno de los balcones de la oficina de La Independencia, rodeado de hasta media docena de banderas rojas, palidecido el rostro por la emoción y las manos temblorosas. A su lado se veían los de algunos de sus compañeros, pálidos también, aunque no tanto. Hacia ellos se volvía a menudo el orador demandando asentimiento, que generosamente le otorgaban todos, murmurando por lo bajo al final de cada período: "¡Bravo! ¡Bravo!", y otras exclamaciones que le daban nuevo y poderoso aliento al ex-profesor para seguir arengando a las masas. Estas le escuchaban con la boca abierta desde la calle estrecha, y con sus gritos y palmoteo también le animaban. Cuando se le agotaron, por fin, las metáforas astronómicas y no tuvo más que decir, recogiendo todas sus fuerzas, gritó con voz estentórea:

— Ciudadanos: ¡Viva la libertad!

Así dió por terminado su discurso, y se retiró del balcón.
SPANISH

Higher Grade—(Second Paper (a))

AURAL COMPREHENSION TEST

Wednesday, 29th May—1.30 p.m. to 2.0 p.m.

This paper must not be seen by any candidate.

INSTRUCTIONS TO THE TEACHER

1. Use the ten minutes preceding the beginning of the test to make yourself thoroughly familiar with the passage to be read.

2. When so instructed by the invigilator, read to the candidates the "Instructions to Candidates" given below.

3. Then read the passage aloud to the candidates, speaking clearly and naturally, and taking not more than four minutes to the reading.

4. After this reading inform the candidates that they will have three minutes in which to study the questions. You yourself will not be allowed to see the questions which are to be answered by the candidates.

5. When so instructed by the invigilator, read the passage a second time, in exactly the same manner as on the first occasion and taking the same amount of time.

6. After the second reading you should leave the examination room.
INSTRUCTIONS TO CANDIDATES

1. Listen carefully to the following passage with a view to answering questions on its content.

2. The questions are to be answered in English.

3. The passage will be read twice, with an interval of three minutes between the readings.

4. No writing should be done while the passage is being read.

5. You may not ask for the repetition of any word or phrase.

Passage to be read to the candidates (maximum time of reading—four minutes)

Llegué a la posada sobre las siete de la tarde. Ya anochecía y hacía mucho frío, y por esto y por lo cansado que me encontraba me alegré mucho de poder dar por terminada otra etapa de mi viaje.

Después de instalarme en mi habitación, de lavarme y de ponerme ropa limpia, bajé al comedor, pedí una cena abundante y me puse, impaciente, a esperar que me la trajeran.

En esto penetraron en el comedor dos viajeros, cuyo aire me hizo adivinar en seguida su respectiva patria: eran un inglés y un francés.

El inglés, hombre de unos cuarenta años, de aspecto cómico, muy alto, con el pantalón muy ancho y la camisa deslumbrante de blancura, recién afeitado y muerto de frío, empezó por dirigir una tímida ojeada a la chimenea. Al verla completamente ocupada, nos miró a todos de aquella manera desdenosa con que los ingleses miran a otros mortales, y dio muestras de dolor al observar que todo el mundo fue a.

Entonces intentó irse; pero pensó en el frío que hacía fuera, y retrocedió... se metió las manos en los bolsillos de su chaqueta, y emprendió una especie de baile alrededor de la habitación, dando saltitos muy menudos con el fin de calentarse los pies. ¡Tenía un aspecto graciosísimo!

El francés, joven, delgado y de vestido elegante, parecía un viajante de comercio. Adoptó el sistema contrario, se acercó a la chimenea, e interrumpió la conversación, diciendo lo siguiente: “¡Heme aquí! ¡Ah! ¡Diablo! ¡Hace un frío que pela! Perdón, señores... No se incomoden ustedes... Les suplico que sigan como estaban... Ya estoy bien”. Y se metió en medio de un grupo de suizos, ocupó el mejor lugar, y comenzó a dar vueltas para calentarse por todos lados.

El inglés miraba al francés con odio mezclado de desprecio, y quizás también con envidia, al verlo en posesión del mejor sitio de la chimenea, mientras que él estaba reducido a dar paseos por la habitación, sin conseguir meter sus pies en calor.
SCOTTISH CERTIFICATE OF EDUCATION

SPANISH
Higher Grade—(Second Paper (a))

AURAL COMPREHENSION TEST

Wednesday, 29th May—1.30 p.m. to 2.0 p.m.

Answers are to be written on the sheet provided for the purpose, on which are also to be written any notes made between the readings.

QUESTIONS

Answer in English the following questions on the passage read to you:

(1) For what reasons was the author pleased to reach the inn? 1

(2) What are the various things he did between the time of his arrival and the appearing of the other two travellers? 2

(3) Describe the Englishman: his age, appearance, and clothes. 2

(4) For what reasons did the situation in the dining-room displease him, and how did he show his displeasure? 2

(5) (a) What was he on the point of doing and why did he change his mind? 2
(b) What did he then do, and what was his main purpose in so doing? 2

(6) Describe the Frenchman: his age, appearance, and clothes.
   What does the author say about his profession?
   How did he set about getting what he wanted, and what success did he have? 4

(7) What were the Englishman’s feelings towards the Frenchman? 1
1. Translate into Spanish:—

It was very late in the evening when the traveller arrived, and the village was covered in deep snow. The hill, with its castle, was dark and shrouded in thick mist. On the wooden bridge leading from the main road to the village the traveller stood for a long time gazing up towards the fortress.

Then he went on to look for lodging for the night. There was still life in the inn, and, although the landlord was surprised to see a stranger at such an hour and could not provide him with a room, he said that he was willing to let him sleep in the parlour. The traveller accepted this offer gladly. There were some peasants there drinking beer, but the wayfarer did not want to talk, and, after having a good supper, he lay down beside the fire on the bag of straw which they brought him. It was warm, the peasants were quiet, and, as he was very weary, he soon fell asleep.

But after a short while he was awakened. An elegantly dressed young man, with narrow eyes and a large nose, was standing before him, together with a servant. A few of the peasants who were in the room had turned their chairs round so as to be able to see and hear better. The young man apologized for having disturbed the traveller, but explained that to stay in the village it was necessary to have the permission of the local count.

2. Write, in Spanish, an essay on one of the following subjects:—

Your essay should be from one to one and a half times the length of the translation of Question 1.

(a) Mi libro predilecto (argumento, personajes, etc.).

(b) Ventajas e inconvenientes de la vida moderna.

(c) La profesión que pienso seguir cuando termine mis estudios en el colegio, y por qué.
ART

Still-Life Painting

Ordinary Grade—(First Paper)

Friday, 24th May—9.30 a.m. to 12.30 p.m.

100 marks are assigned to this paper

On the sheet of paper supplied to you paint the group set before you. The painting should fill the paper. Only water colour or body colour may be used.
A finished drawing of each model is not desired. Any object, the sole function of which is to enable the model to maintain the pose, should be indicated but not drawn in detail.

50 marks are assigned to this paper.

On the single sheet of cartridge paper provided make two drawings, one of each model. Each drawing should occupy approximately half the sheet of cartridge paper provided. Including any rest periods (3 minutes), each pose will be of 25 minutes’ duration, and 10 minutes will be allowed for the posing of the second model.
1963

SCOTTISH CERTIFICATE OF EDUCATION

ART

Plant Form

Ordinary Grade—(Third Paper)

Friday, 24th May—1.30 p.m. to 2.30 p.m.

50 marks are assigned to this paper

Make a detailed study in pencil of the spray of leaves provided.
ART

Composition

Ordinary Grade—(Fourth Paper)

Tuesday, 14th May—9.30 a.m. to 12.30 p.m.

100 marks are assigned to this paper

If your composition is painted it should fill the sheet of paper supplied; if modelled or carved its maximum dimension should not exceed 10 inches.

You may either (a) paint your composition in water colour or body colour;
   (b) model it in clay or other suitable material;
   (c) carve it in plaster or other suitable material.

Choose ONE of the following subjects:—

1. Escape.
2. The road-menders.
3. The challenge.
4. High wind by the sea.
ART

Pattern Design

Ordinary Grade—(Fifth Paper)

Friday, 24th May—1.30 p.m. to 3.0 p.m.

Tracing paper and sketching paper may be used and should be handed to the invigilator SEPARATELY from your finished work. Colour work must be executed in water colour or body colour.

50 marks are assigned to this paper

Answer ONE of the following questions:

1. Design in three colours a repeating pattern based entirely on almond shapes of different sizes. The theme of the pattern is “Eddying Backwater”. The repeats should measure not less than 2 1/2 inches in any direction and enough should be completed to show the general effect of the pattern.

2. Within a rectangle 12 inches by 10 inches create an “abstract” design to express either “Restless Night”, “Tribal Rhythm” or “Splendour and Plenty”.

3. Create a non-repeating decoration or motif centred on an upright line 9 inches long. The dominating colour should be either blue or red. Make some use of contrasting textures.
Choose ONE of the following:

1. Embroidery

Design and embroider the upper side of a circular cushion cover for use in the living room of a Scottish farm or croft. Show the layout of the design in outline on the material and complete as much of the stitching as time allows. Black, white and no more than three other colours may be used.

2. Bookcraft

Answer either (a) or (b).

(a) Make a portfolio 14 1/2 inches by 12 inches, with 3/4 inch spine, to hold architectural sketches. The portfolio should have three stiffened flaps. The interior lining paper should be decorated with a simple stripe pattern using only straight ruled lines and circles (approximately 3/4 inch diameter) drawn free-hand. Pen and ink should be used for this pattern. The initials C.W. should be painted on the outer cover-paper, giving careful thought to scale and placing.

(b) Set up in type and print the title page of a book 7 1/2 inches by 5 inches (long side upright). The wording is as follows:

Poems, chiefly in the Scottish dialect, by Robert Burns, Kilmarnock; printed by John Wilson, 1786.

Include a suitably designed decorative print no larger than 3 inches by 2 inches.
3. Lettering

Answer both (a) and (b).

(a) Using pens of suitable size letter the following:

The Little Black Rose
The Little Black Rose shall be red at last;
What made it black but the March wind dry,
And the tear of the widow that fell on it fast?
It shall redden the hills when June is nigh.

The Silk of the Kine shall rest at last;
What drove her forth but the dragon-fly?
In the golden vale she shall feed full fast,
With her mild gold horn and her slow dark eye.

The wounded wood-dove lies dead at last!
The pine long bleeding, it shall not die!
This song is secret. Mine ear is passed
In a wind o’er the plains at Athenry.

Aubrey De Vere.

(b) Within a panel measuring 14 inches by 8 inches, using Roman capitals, draw and paint in black the sign

Jazz Festival

4. Pottery

Answer both (a) and (b).

(a) Throw a pot approximately 5\(\frac{1}{2}\) inches high, the top to be no more than 2 inches in diameter and the widest part to be nearer the base, OR model a ceramic group on the theme “Mother with young” (human or animal). The greatest dimension should not be more than 8 inches.

(b) On paper, using a stone coloured ground, design a circular decorative plate, 9 inches in diameter. The decoration should be suitable for sgraffito or trailed slip. This may be represented in paint by a white or coloured line.

5. Puppetry

Design in colour a glove puppet of Admiral Nelson or of one of the kings described below.

“We three Kings of Orient are,
Bearing gifts we traverse afar.”

Show both front and side view of the head. Make the head (approximately 4 inches high) and the costume from the materials available.
6. **Block Printing or Screen Printing**

**Answer either (a) or (b).**

(a) Design in two colours a repeating pattern for a summer dress to be worn by a dark-haired girl. The repeat, size 6 inches by 3 inches, should be printed in vertical or horizontal bands on the material provided.

(b) Design and print in two colours a wrapping paper for the Scottish Craft Centre, the size of repeat to be 3 inches by 1 1/2 inches.

7. **Architectural Modelling**

Design and make in stiff cardboard and/or balsa wood, and such other suitable material as may be required, either a small café with open-air terrace or a boat-house with sail loft and attached clubroom. The scale of the model should be marked on the base-board on which it is built.
1963  
Ord I, II, III, IV, V, VI  

SCOTTISH CERTIFICATE OF EDUCATION

ART

Ordinary Grade—(First, Second, Third, Fourth, Fifth and Sixth Papers)

CONFIDENTIAL INSTRUCTIONS  
to Principal Art Teachers

For the First Paper the candidates should be supplied with good quality unmounted cartridge paper, size 18 inches by 15 inches. For the Second, Third, Fourth and Fifth Papers the quality should be the same as for the First Paper but the size should be 15 inches by 11 inches. Preliminary sketching paper should be available for use as required.

First Paper—Still-life Painting

The group should be composed of the following: a light green background of rough-textured fabric, a brown duffle bag, a partly opened Ordnance Survey map, two apples of differing colour, foreground to suit.

Second Paper—Life Sketching

First Model: The model stands with feet approximately 10 inches apart, facing the candidates. The hands are crossed over one another on the top of a staff about chest high. The head is inclined to the left and the model is looking slightly upwards.

Second Model: The model is seated sideways on a plain wooden chair. His (or her) left leg is crossed over the right. The right hand lies across the middle of the left thigh. The left upper arm rests along the back of the chair, with the hand upon the upper part of the head. The head inclines naturally to give an attitude of contemplation. (A pad may be placed between the upper arm and the top of the chair).

The models may wear any suitable attire which exposes the lower arms from the elbows and the lower legs from the knees.

Third Paper—Plant Form

Each candidate should be supplied with a suitable specimen of one of the following: fuchsia, forsythia, broom, larch, docken.
Sixth Paper

Embroidery
Each candidate will require a piece of evenly woven linen or cotton material suitable for medium embroidery threads, the size of the material to be not less than 15 inches by 15 inches and the colour medium blue.

Bookcraft
Each candidate will require either (a) or (b).

(a) Bookbinding: One sheet of medium weight strawboard, 30 inches by 25 inches, one additional piece, 15 inches by 12½ inches, a reasonable selection of plain end papers, cover papers and bookbinding cloth.

(b) Book printing: Six sheets of paper, 7½ inches by 5 inches, suitable for printing, a block (lino or other material), 4 inches by 2 inches. Such type as is normally available for printing in the school should be ready for use by the candidates concerned.

Block Printing and Screen Printing

(a) Fabric printing: Each candidate will require a piece of plain, evenly woven, white cotton material, measuring not less than 20 inches by 18 inches, and either two screens, not less than 12 inches by 12 inches, or two lino blocks, 6 inches by 4 inches. Provision should be made for the candidates to alter the size of the blocks.

(b) Other forms of block or screen printing (excepting book printing): Each candidate will require screens or blocks as for fabric printing, and six sheets of thin printing paper, 15 inches by 11 inches.

Architectural Modelling
Each candidate will require a suitable base board (e.g. of strawboard), 12 inches by 10 inches, marked out in 1-inch squares. A reasonable selection of pieces of card, balsa wood, etc., of the kind normally used by the candidates for model making, should be available.

N.B.—In all the above Papers only one attempt at the test may be submitted by each candidate.
ART

Figure Composition

Higher Grade—(First Paper)

Tuesday, 14th May—9.30 a.m. to 12.30 p.m.

Your figure composition must be done in colour, using water colour, gouache (body colour), poster or powder colour, but NOT oil colours or pastels. It should fill the sheet of paper with which you have been supplied. Due credit will be given to preliminary sketches which must be done on the sketching paper supplied and attached to the BACK of the finished painting.

100 marks are assigned to this paper.

Choose ONE of the following subjects.

1. The last load.
2. Border incident.
3. Warm summer night.
4. Sight-seeing.
All rough work and preliminary sketches must be done on the sketching paper supplied and attached to the back of the completed design. Tracing paper may be used in all questions, but this should be handed in separately from your finished work. Colour work must be executed in water colour or gouache (body colour) or poster or powder colour.

100 marks are assigned to this paper.

Answer ONE of the following questions.

1. Design in colour an all-over pattern for material to be used for curtains in the restaurant of a zoological garden. Complete four repeats, each 6 inches by 4 inches.

2. Design in colour a paper book jacket appropriate to one of the following book titles:
   (a) The Bee-keeper, (b) The Pony Trek, (c) Oriental Art, (d) The Wayfarer.
   The book measures 10 inches by 7½ inches (long side upright) and has a 1 inch spine.

3. Using a lettering pen of suitable size write the following passage in script in a panel 12 inches by 10 inches. Add any necessary decoration.

   Flannan Isle
   But, as we near'd the lonely Isle;
   And look'd up at the naked height;
   And saw the lighthouse lowering white,
   With blinded lantern, that all night
   Had never shot a spark
   Of comfort through the dark,
   So ghostly in the cold sunlight
   It seem'd, that we were struck the while
   With wonder all too dread for words.

   W. W. Gibson.
4. Design in colour a toy animal (approximately 8 inches long) to be made in coloured felt and decorated with embroidery.

Choose one of the following:—dragon, French poodle, donkey, tiger.

The design should be drawn full size and the types of fabric, thread and stitch should be indicated.

5. Design in colour a marionette of one of the following characters:—Lady Macbeth, Rob Roy, The Pardoner, A Gossip.

Make your design full size and show the head (front and side views) and the costume (front view only). Indicate where the strings are attached to the puppet.
ART

Representational Drawing and Painting
Higher Grade—(Third Paper)

Friday, 24th May—9.30 a.m. to 12.30 p.m.

100 marks are assigned to this paper

Still-Life Group
On the sheet of paper supplied to you paint the group set before you. The painting should fill the paper. Only water colour or gouache (body colour) may be used.
ART

Life Sketching
Higher Grade—(Fourth Paper)

Tuesday, 14th May—1.30 p.m. to 2.30 p.m.

50 marks are assigned to this section

On the single sheet of cartridge paper provided make two drawings, one of each model. Each drawing should occupy approximately half the sheet of cartridge paper provided. Including any rest periods (3 minutes), each pose will be of 25 minutes’ duration, and 10 minutes will be allowed for the posing of the second model.

N.B.—A finished drawing of each model is not desired. Any object the sole function of which is to enable the model to maintain the pose should be indicated but not drawn in detail.
HISTORY AND APPRECIATION OF PAINTING AND ARCHITECTURE

TWO questions should be attempted, No. 1, and any one other.

25 marks are assigned to each question.

1. Either

Answer briefly any five of the following:

(a) Name the schools of painting to which the following artists belonged: David, Giotto, Veronese, Gaugin, Gericault.

(b) Describe either “The Ambassadors” by Holbein or “The Artist’s Bedroom” by Van Gogh.

(c) Who painted the following? “Mrs. James Campbell”, “Puck”, “Houseboats on Loch Lomond”, “The Letter of Introduction”, “Galloway Landscape”.

(d) Name four artists who were renowned as fresco painters. In what building can the work of one of them be seen?

(e) Explain briefly two of the following: impasto, medium, chiaroscuro, gesso ground, “plein air”.

(f) Name two narrative and two landscape painters (Scottish) and add the title of a picture by one of the former.
Answer briefly any five of the following:

(g) To illustrate the early use of the following types of wall construction give the name of an appropriate building or architectural period: timber framing with wattle filling, concrete with brick facing, dressed stone with rubble filling, reinforced concrete, cast-iron framing with glass.

(h) Make a sketch to show the characteristic features of one of the following types of Scottish dwelling: An 18th century manse or farmhouse, a Victorian villa, an early 20th century tenement.

(i) Name the architectural style of one Scottish cathedral or abbey. Draw a simple plan (main building only) and an outline sketch of a prominent window.

(j) Name a well-known building by each of the following architects: Ictinus, Bramante, Palladio, Inigo Jones, Le Corbusier.

(k) Name a temple, other than the Parthenon, on the Acropolis at Athens. Add a sketch of its front elevation.

(l) To what period does the Hathor-headed capital belong? Name three other types of capital from this period and state one building in which one of these types is found.

2. Discuss the differences between "expressionism" and "impressionism" in painting, with reference to appropriate artists and their work.

3. Discuss the changes in pictorial art which resulted in the evolution of the easel picture from the mosaic. Illustrate by reference to typical mural works as well as to later pictures.

4. Compare the work of the earlier Flemish masters with that of Rubens, making reference to subject matter, patronage, style and technique.

5. Discuss the influence of classical mythology on artists' choice of subject matter, giving characteristic examples.

6. What evidences of Gothic and/or Renaissance influences are still to be found in the buildings in your local main street? Illustrate your answer with sketches.

7. A characteristic of Gothic cathedrals was their great height. Why was this desired and how was it achieved? Contrast with the characteristics of other periods and illustrate by sketches where appropriate.

8. A school building, well-designed sixty years ago, requires extension. Should the new wing conform to the earlier style? Discuss the arguments for and against and give your opinion. Refer to historical examples of this problem.

9. Discuss briefly the interior planning and decoration of places of worship in at least three different architectural periods. Illustrate by sketches.
CONFIDENTIAL INSTRUCTIONS TO PRINCIPAL ART TEACHERS

**First Paper—Composition**
The test should be painted on unmounted cartridge paper of good quality, size 18 inches by 13 inches.

**Second Paper—Design**
Paper: 15 inches by 11 inches, same quality as above.

**Third Paper—Still-Life**
Paper: 18 inches by 15 inches, same quality as above.
The group should be composed of the following: a pale grey background with suitable foreground, a tall bottle, a woollen cap (e.g. ski cap), a length of rope, two apples. The group should be placed well below eye level.

**Fourth Paper—Drawing from Life**
Paper: 15 inches by 11 inches, same quality as above.
(The poses are the same as for the Ordinary Grade.)
First model: The model stands with feet approximately 10 inches apart, facing the candidates. The hands are crossed over one another on the top of a staff about chest high. The head is inclined to the left and the model is looking slightly upwards.
Second model: The model is seated sideways on a plain wooden chair. His (or her) left leg is crossed over the right. The right hand lies across the middle of the left thigh. The left upper arm rests along the back of the chair, with the hand upon the upper part of the head. The head inclines naturally to give an attitude of contemplation. (A pad may be placed between the upper arm and the top of the chair.)
The models may wear any suitable attire which exposes the lower arms from the elbows and the lower legs from the knees.
SCOTTISH CERTIFICATE OF EDUCATION

MUSIC

Ordinary Grade—(Paper (b))

Thursday, 23rd May—10.15 a.m. to 12.15 p.m.

Write in ink. Care must be taken to make the notation clear; notes indistinctly placed will be regarded as wrong. Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The answers to Section I must be written in the space provided on this examination paper, which must be given up with the examination book. The sheets of manuscript music paper provided may be used for rough work on these questions.

The answers to Section II are to be written in the examination book but the quotations required in answer to these questions should be entered in the manuscript sheets provided.

The value attached to each question, or to each part of a question, is shown in brackets after the question.

FILL THIS IN FIRST

Name of School (or Centre)

Name of Candidate

(C41599)
SECTION I

ALL the questions in this section should be attempted.

1. (a) Write in staff notation a melody suitable for singing to the following stanza. Place each syllable of the words below the note or notes to which it is to be sung. Add a musical term to indicate speed or mood, and insert any necessary expression marks. Words or phrases may be repeated.

   "Oh dear!" said Mrs. Centipede,
   "'Tis washing day to-morrow.
   A clothes line I shall really need
   To beg, or buy, or borrow.
   With quite a hundred pairs of socks
   That must be washed or mended,
   As well as pinafores and frocks
   My work is never ended."

(b) Write the solfa names over the first eight notes of your melody. (2)

(Total marks = 20)
2. (a) EITHER

(i) Continue the following to make a complete tune of 12 or 16 bars in length:

\[ \text{Scherzoso} \]

OR

(ii) Write a melody of eight bars in length in the key of A flat major using the following rhythm for the opening:

\[ \text{Allegro vivace} \]

(b) Re-write on the last two staves on page 7 the first two bars of your melody so that they can be played on the viola, by transposing these bars a major seventh higher. Use the appropriate clef and key signature.

(Total marks = 28)
3. (a) Write, for flute, a simple accompaniment to the following song. The first phrase of the accompaniment should be regarded as an "alto" part, and the second phrase as a descant. Keep the accompaniment within this compass:

\[\begin{align*}
\text{Voice} & : \quad \text{Across the fields and meadows Where} \\
\text{Flute} & : \quad \\
\end{align*}\]

\[\begin{align*}
\text{Voice} & : \quad \text{Pretty wild flowers grow} \\
\text{Flute} & : \quad I \text{ see the windmills} \\
\end{align*}\]

\[\begin{align*}
\text{Flute} & : \quad \\
\text{Voice} & : \quad \text{Turning slowly while summer breezes blow.} \\
\end{align*}\]
(b) (i) Indicate, by placing a "7" over it, any note which is a seventh above the key-note of the given tune.

(ii) Indicate by means of [-], any two adjacent notes of the given tune which are a major third apart.

(iii) Name a major key which along with that of its tonic minor contains the interval marked *.

(Total marks = 20)
SECTION II

Answer Question 7, and ONE other question from this section.

(Extracts printed in question 7 must not be used for quotation.)

4. (a) Write brief notes on three of the following; two must be selected from column (1), and one from column (2):—

(1) (2)
(i) Toccata (i) The Scottish National Orchestra
(ii) Da capo aria (ii) The B.B.C. Scottish Orchestra
(iii) Chorale
(iv) Incidental music

(4 marks each)

(b) Write, in staff notation, two bars of melody from any piece which illustrates one of the topics you have chosen from column (1).

(Total marks = 14)

5. (a) List the titles of six folk-tunes; one in a major key, one in a minor key, one which is an example of a pentatonic tune, one in compound time, one in simple binary form, and one in simple ternary form. After the title of each tune state which of the above features it exemplifies.

(b) Write in staff notation four bars of any one of the tunes you have named.

(c) Name any distinguished composer whose work shows the influence of folk music, and mention any one of his compositions in which this influence can be discerned.

(Total marks = 14)
6. MENDELSSOHN, SULLIVAN, HANDEL, MOZART.

(a) List the above composers in chronological order. (1)

(b) State the dates of two of them. (1)

(c) Name a well-known overture by each composer; very briefly describe the formal design of each overture. (8)

(d) Write in staff notation four bars of any one of the overtures you have chosen. (4)

(Total marks = 14)

7. (a) List, in the order in which they appear on the first page of the score, the instruments which are used in the work by a French composer which you have been studying. (3½)

(b) What is meant by "le chant en dehors"? (1)

(c) Name a prominent feature of the first four bars of the last movement of the string quartet which you have been studying. (1)

(d) At what point in the chorus "Blessing and honour, glory and power be unto Him" are trumpets and drums introduced? (1)

(e) What instruments are used before that point? (1)

(f) Write in staff notation the first eight bars of the first subject of the concerto which you have been studying. (4)
(g) Identify any three of the following excerpts. Name the work and the composer, indicate the movement if there is more than one, and the date of composition.

(Total marks = 16)

(The extracts printed above must not be used for quotations)
INSTRUCTIONS FOR THE CONDUCT OF
DICTATION TESTS

Ordinary Grade—Thursday, 23rd May—9.30 a.m. to 9.50 a.m.

Higher Grade—Thursday, 23rd May—3.30 p.m. to 4 p.m.
1. Instructions printed in bold type are to be read aloud to the candidates. All other instructions are for the use of the teacher administering the tests. No further instructions, guidance, advice, or help of any kind, spoken or otherwise, beyond those in bold type, are to be given to the candidates.

2. The tests must be played at the beat or pulse speeds indicated. An audible, ticking metronome must not be used during the examination.

3. In playing the melody dictation test, the melody should be slightly more prominent than the accompaniment. If difficulty is found in playing the test, the omission of a note or two in the accompanying parts on occasion is less important than allowing the rhythm to falter.

4. The sustaining pedal should not be used during the playing of the tests as it blurs the outline.

5. Read the instructions in bold type aloud to the candidates, clearly and slowly. If the instructions about the timing of pauses for writing are adhered to closely, it will be found that the tests can be comfortably administered within the time allowed.

6. The music teacher may prefer to administer the tests without assistance, in which case the invigilator will exercise only normal general supervision of the examination. It may be found, however, that the tests might be more conveniently and comfortably administered by two persons. Here are two suggested methods, either of which is permissible.
   
   (a) The music teacher reads the instructions aloud to the candidates, and plays the tests; the invigilator measures the pause lengths, and signals the teacher when to begin to play or speak again after each pause.

   (b) The music teacher and an assistant may arrange that one of them reads aloud the instructions to the candidates, and measures the length of time allowed for pauses, and the other does the actual playing of the tests only; where this method is used the invigilator will exercise only normal general supervision.

   Whichever method is used, the invigilator will not intervene to end the examination before the final playing of the second test has been completed and a final pause of one minute has elapsed for writing. If the administration of the tests overruns the allotted time given at the top of this paper, the invigilator will make a note of the amount of extra time taken, and attach it to the answers handed in by the candidates, so that the examiner may take into consideration the extra time allowed for working when he assesses the answers.

7. A stop-watch (or clock) should be used for the timing of pauses for writing.

8. Candidates are to be allowed to work, and hand in, their answers in pencil, and they may be allowed to use an indiarubber. Except when specifically instructed not to write during the playing of the test, candidates may, if they wish, write while the test is being played.

9. Invigilators must not count aloud the passage of time during the pauses for writing.
1963

SCOTTISH CERTIFICATE OF EDUCATION

MUSIC

Ordinary Grade—(Paper (a))

DICTATION TEST

Thursday, 23rd May—9.30 a.m. to 9.50 a.m.
This is the test in musical dictation. Write in pencil, clearly and legibly. You are to write down the melody only, although the melody will be played with accompaniment most of the time. The test will be written in the treble clef, in the key of G minor. Now, write the treble clef and the key-signature of G minor, then put down your pencils.

Allow $\frac{1}{2}$ minute to write.

After giving you the beat-speed, the key-chord, and the key-note, I shall play the test twice before you begin to write. The test will then be played at short intervals for about ten minutes. At an early stage the melody will be played twice without accompaniment. Do not write until you are told. Listen carefully and try to remember the melody.

This is the speed of the beat or pulse.

Tap aloud 6 beats at $\frac{3}{4} = 66$.

This is the key-chord in G minor.

Play

This is the key-note, G, on the second line.

Play
Continue without any pause.

I am going to tap the beat-speed again. I want you to tap with your fingers on the desk along with me, and you will continue to tap while I play through the test again.

Tap at $\frac{3}{4} = 66$ for 6 beats, at which point you begin to play the test again as written, without giving either key-chord or key-note, and without making any break in the tapped rhythm.

You may now write. Be sure to insert the time-signature.

Allow a pause of 1 minute for writing.

I am now going to play the first half of the test, melody only.

Sound the key-chord as above.
Sound the key-note as above.
Play from the beginning to *, melody only.
Allow a pause of 1 minute for writing.

I am going to play the test right through from beginning to end, melody only.

Sound the key-chord.
Sound the key-note.
Play, melody only, through the whole test.
Allow a pause of 1 minute for writing.

I am going to play the second half of the test, melody only.

Do NOT sound the key-chord, or key-note.
Play the test from * to the end, melody only.
Allow a pause of $\frac{1}{2}$ minute for writing.

I am going to play the test right through, with accompaniment.

Sound the key-chord.
Sound the key-note.
Play the test through as written.
Allow a pause of 1 minute for writing.

I am going to give the beat-speed again, and then play the test through.

Tap 6 beats at $\frac{3}{4} = 66$.
Sound the key-chord.
Sound the key-note.
Play the test as written.
Allow a pause of 1 minute for writing.
I am going to play the test through twice in succession.
  Sound the key-chord.
  Sound the key-note.
  Play the test through as written, twice in succession with no break for writing between the playings.
  Allow a pause of 2 minutes for writing.

During the next two playings, which are the last two, listen carefully to the phrasing, and add phrasing marks.

Here is the test for the second last time.
  Sound the key-chord.
  Sound the key-note.
  Play the test as written, phrasing carefully.
  Allow a pause of 1 minute for writing.

Here is the test for the last time.
  Sound the key-chord.
  Sound the key-note.
  Play the test as written, phrasing carefully.

If there is more than one minute of the allotted time left candidates may use it to revise their work, but, NO FURTHER PLAYINGS OF THE TEST ARE TO BE GIVEN.

One minute before the end of the examination time, give the candidates the following instruction:—

Before handing in your papers, draw a pencil line through all rough workings.

END
1963

SCOTTISH CERTIFICATE OF EDUCATION

MUSIC

Higher Grade—(Paper II (b))

Thursday, 23rd May—1.30 p.m. to 2.30 p.m.

Write in ink. Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

All answers are to be written in the examination book but the quotations required in answer to these questions should be entered in the manuscript music sheets provided.

The value attached to each question, or to each part of a question, is shown in brackets after the question.
1. (a) Briefly describe four types of composition for unaccompanied voices which were characteristic of Elizabethan and Jacobean times. (6)
   
   (b) State the titles of examples of any two of the compositions you have described. (2)

   (c) Name three composers who, during the nineteenth or twentieth century wrote music for unaccompanied voices. State the title of an example of such music by any one of them. (2)

   (d) Write in staff notation four bars of any one of the examples which you have named in either (b) or (c). (4)

   (Total marks = 14)

2. (a) Name six of the important features of the music of the period 1830–1900. (6)

   (b) Write a brief note on any one of the above. Refer to specific works. (4)

   (c) Write in staff notation four bars of thematic material from any one of the works you have mentioned. (4)

   (Total marks = 14)

3. (a) Write a brief account of the suite in the time of Bach and Handel. (6)

   (b) State the titles of two suites by nineteenth or twentieth century composers, and briefly describe how any one of these differs from, or resembles, the suites of Bach and Handel. (4)

   (c) Write in staff notation four bars of thematic material from any one of the works you have named in your answer to (b), or from any movement of a suite by Bach, Handel, or by one of their contemporaries. (4)

   (Total marks = 14)

4. (a) List the brass and percussion instruments in the order in which they appear on the first page of the score of the overture which you have been studying. (2½)

   (b) Write in staff notation four bars of the theme with which the allegro section of the overture begins. (4)

   (c) How is this theme subsequently treated? (2)

   (d) What feature of the overture anticipates the music of the opera which follows? (2)

   (e) State the titles of two other operas by the same composer. (1)

   (f) Identify three of the following excerpts. Name the work, the movement (if there is more than one), the composer, and the date of composition. (4½)

   (Total marks = 16)
Moderately

Very quick

Moderately

Moderately

With dignity
1963

SCOTTISH CERTIFICATE OF EDUCATION

MUSIC

Higher Grade—(Paper II (a))

DICTATION TESTS

Thursday, 23rd May—3.30 p.m. to 4.0 p.m.
First Test—Melody Dictation

This is the test in melody dictation. Write, in pencil, clearly and legibly. You are to write down the melody only, although the melody will be played with accompaniment most of the time. The test will be written in the treble clef, in the key of A major. Now write the treble clef and the key-signature of A major, then put down your pencils.

Allow $\frac{1}{4}$ minute to write.

After giving you the beat-speed, the key-chord, and the key-note, I shall play the test twice before you begin to write. The test will then be played at short intervals for about ten minutes. At an early stage the melody will be played twice without accompaniment. Do not write until you are told. Listen carefully, and try to remember the melody.

This is the speed of the beat or pulse.

Tap aloud 6 beats at $\mathbf{\text{I}} = 60$.

This is the key-chord in A major.

Play

This is the key-note, A, in the second space.

Play

Page two
Here is the test:—

Play as written.

Continue without any pause.
I am going to tap the beat-speed again. I want you to tap with your fingers on the desk along with me, and you will continue to tap while I play through the test again.

Tap at $ \frac{4}{\text{beat}} = 60$ for 4 beats, at which point you begin to play the test again as written, without giving either key-chord or key-note, and without making any break in the tapped rhythm.

You may now write. Be sure to insert the time-signature.
Allow a pause of 1 minute for writing.

I am now going to play the first half of the test, melody only.
Sound the key-chord as above.
Sound the key-note as above.
Play from the beginning to ★, melody only.
Allow a pause of 1 minute for writing.

I am going to play the test through from beginning to end, melody only.
Sound the key-chord.
Sound the key-note.
Play, melody only, through the whole test.
Allow a pause of 1 minute for writing.

I am going to play the second half of the test, melody only.
Sound the key-chord.
Sound the key-note.
Play the test from ★ to the end, melody only.
Allow a pause of 1 minute for writing.

I am going to give the beat speed again, and then play the test right through with accompaniment.
Tap 4 beats at $ \frac{4}{\text{beat}} = 60$.
Sound the key-chord.
Sound the key-note.
Play the test as written.
Allow a pause of 1 minute for writing.

Page four
I am going to play the test through twice in succession.
   Sound the key-chord.
   Sound the key-note.
   Play the test through as written, twice in succession, with no break for writing between the playings.
   Allow a pause of 2 minutes for writing.

During the next two playings, which are the last two, listen carefully to the phrasing, and add phrasing marks.

Here is the test for the second last time.
   Sound the key-chord.
   Sound the key-note.
   Play the test as written, phrasing carefully.
   Allow a pause of 1 minute for writing.

Here is the test for the last time.
   Sound the key-chord.
   Sound the key-note.
   Play the test as written, phrasing carefully.
   Allow a pause of 1 minute for writing.

END OF MELODY DICTATION TEST
Second Test—Harmony Dictation

The harmony dictation test is in three parts, soprano, alto, and bass. Bracket together two staves, one having a treble clef, and one having a bass clef, then put down your pencils.

Allow $\frac{1}{2}$ minute to do this.

The test is four bars long beginning on the first beat of a bar. Now write the key-signature of D major, and the time signature for 3-crotchets in a bar at the beginning of both staves, then put down your pencils.

Allow $\frac{1}{2}$ minute to do this.

The speed of the test is as follows:

Here tap two bars of $\frac{3}{4}$ time at the speed $\frac{4}{4} = 66$.

The key-chord in D major sounds thus:

Here play,

The key-note, D, on the third line of the bass stave, and the key-note, D, in the space below the first line of the treble stave, sound thus:

Here play,
I shall play the test twice before you may start to write, and then six more
times at intervals of about 1 minute, allowing you time for writing. Listen
closely and try to remember it. Do not write until you are told.

Here it is :—

Sound the key-chord and key-notes as above.
Now play the test.

\[ \text{\textit{\$d = 66\$}} \]

Without waiting after playing, continue as follows:—

Here it is again. This time I shall count aloud, “one-two-three, one-two-
three,” as I play, so that you may sense the time of the passage.

Count aloud one bar before beginning to play the test, then continue to count aloud
as you play through the test. Do NOT sound the key-chord and key-notes before
playing over on this occasion.

You may now begin to write.
Allow a pause of 1 minute for writing.

I shall now play the test six times at intervals of 1 minute.

Here it is for the first time :—

Sound the key-chord and key-notes.
Count aloud at the speed $d = 66$, “one-two-three,” play the test as written, but
cease to count aloud thereafter.
Allow a pause of 1 minute for writing.

Here it is for the second time :—Proceed as for “the first time”. Allow a pause of
1 minute for writing.

Here it is for the third time :—Proceed as for “the first time”. Allow a pause of
1 minute for writing.

Here it is for the fourth time :—Proceed as for “the first time”. Allow a pause of
1 minute for writing.

Here it is for the fifth time :—Proceed as for “the first time”. Allow a pause of
1 minute for writing.
Here it is for the sixth, and last, time:—Proceed as for “the first time”. Allow a pause of 1 minute for writing.

If there is more than 1 minute of the allotted time left, candidates may use it to revise their work, but, NO FURTHER PLAYINGS OF THE TEST ARE TO BE GIVEN.

One minute before the end of the examination time, give the candidates the following instruction:—

**Before handing in your paper, draw a pencil line through all rough workings.**

END
AGRICULTURE
Ordinary Grade

Monday, 6th May—9.30 a.m. to 12 Noon.

Answer any FIVE questions.

Answers should, wherever possible, be illustrated by suitable diagrams.

Mathematical tables are supplied.

A list of atomic weights will be found in the book of mathematical tables.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.

1. Explain what is meant by the terms oestrus, fertilisation, pregnancy and parturition. State the gestation period of the sow and of the cow. (10)

With the aid of a labelled diagram, describe the reproductive system of the sow, stating the functions of each part. (10)

2. Describe, in detail, the 4-stroke cycle of events in a cylinder of a diesel tractor engine and explain how it differs from the 4-stroke cycle in a vaporising oil engine. (15)

Define watt and kilowatt-hour. Calculate the cost, at 1½d. per unit, of heating a calf pen for 10 hours with two 200-watt heaters connected to a 240 volt electrical supply. (5)

3. Describe an experiment to determine the percentage weight of water in a sample of soil. (4)

State the factors which influence soil drainage and describe their effects in detail. Name two ways besides drainage in which water leaves soil. (13)

Explain, briefly, how the amount of water in soil influences the soil temperature. (3)
4. Explain what is meant by weeds and in what ways they are harmful in agriculture. (6)

Name two common farm weeds, briefly describe the botanical characteristics which contribute to the prevalence of each, and name crops in which each is found. (8)

Briefly describe, with examples, two ways in which weeds are controlled in growing crops. (6)

5. Name three phosphatic fertilisers. Select one of them, state the chemical formula of the pure substance and calculate the percentage weight of phosphorus in it. (8)

Describe the effects on plants of adding to the soil:—
   (a) phosphatic and (b) nitrogenous fertilisers. (8)

State the symptoms in growing plants of deficiency of two essential plant food elements other than nitrogen, phosphorus and potassium. (4)

6. Sketch a rope and pulley system which has a velocity ratio of 5. Assuming that the efficiency of the system is 85 per cent., calculate the effort required to raise a load of 300 lbs. (6)

With reference to a labelled diagram, explain how a threshing machine works. (14)

7. Name two internal parasites of sheep. Select one of them, describe its life history in detail, discuss its economic significance and describe suitable methods by which it can be controlled. (20)

8. Describe, under the following headings, how to grow a crop of oats:
   place in the rotation; preparation of the soil; manuring; seed rate and method of sowing; harvesting.

Indicate, where appropriate, when the various operations you describe ought to be carried out. (20)
AGRICULTURE

Higher Grade—(First Paper)

Monday, 6th May—9.30 a.m. to 11.30 a.m.

Answer any FIVE questions.

Answers should, wherever possible, be illustrated by suitable diagrams.

Mathematical tables are supplied.

A list of atomic weights will be found in the book of mathematical tables.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.

1. With reference to labelled diagrams describe the working of those parts of a 4-stroke diesel tractor engine by which (a) fuel is delivered to the cylinders and (b) the rate of delivery of fuel is controlled. Explain how the methods of controlling the rate of delivery of fuel in a vaporising oil tractor engine differ from the methods employed in a diesel tractor engine. (20)

2. What conversion of energy takes place in an electric motor? With the help of diagrams explain how this conversion is achieved. State very briefly three purposes for which electric motors are used on farms. (10)

Explain the principles of the working of any type of farm grain dryer and how grain is dried through its use.

After its moisture content had been reduced from 22 per cent. to 14 per cent. by drying, a quantity of grain weighed 2,000 lb. Calculate its weight before it was dried. (8)

3. Explain how physical, biological and climatic factors contribute to the formation of soil. (20)
4. Describe in detail an experiment to determine which elements are essential for healthy plant growth. Name six such elements and indicate the symptoms by which a deficiency of each can be detected in growing plants.

Name the essential elements which are commonly applied as fertilisers and explain why only a few essential elements are applied in this way.

5. Explain, with examples, how you would determine (a) which of two fertilisers, both containing the same essential element, provides the better value and (b) which contains the higher percentage weight of the essential element in the pure substance.

Give an account, with chemical equations, of one method by which ammonium sulphate is manufactured.

Discuss briefly the points which a farmer should consider before he decides which fertilisers to apply to a particular crop.

6. Explain in detail (a) what is meant by hydrogen-ion concentration, (b) the relationship between the hydrogen-ion concentration and the pH of a solution, (c) the effect on the soil pH of adding lime to the soil, and (d) the practical value of knowing the pH of each field of a farm.

7. Write explanatory notes about FOUR of the following:—
lubrication and lubricants; the cooling of tractor engines; the principle of the hydraulic lift; Ohm’s Law; safety precautions with electricity; crumb structure in soils.
SCOTTISH CERTIFICATE OF EDUCATION

AGRICULTURE

Higher Grade—(Second Paper)

Monday, 6th May—1.30 p.m. to 3.30 p.m.

Answer any FIVE questions.

Answers should, wherever possible, be illustrated by suitable diagrams.

Mathematical tables are supplied.

A list of atomic weights will be found in the book of mathematical tables.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.

1. Explain what is meant by photosynthesis, and why this process is important in agriculture. Name two of its products, and describe a test for one of them. (8)

State the environmental factors which influence photosynthesis and describe the effects of each. Explain what can be done in farming practice to avoid conditions which might hinder photosynthesis. (12)

2. What is meant by tillering in cereals and what are its advantages? Give an account of the factors which influence it. With the help of labelled diagrams describe the development of a named cereal from the beginning of germination of the grain to the stage at which tillering takes place. (10)

Name a fungus disease of cereal crops. Describe its life history, the damage it causes and suitable means of control. (10)

3. Make a list of the items of information you would need to enable you to calculate as accurately as possible, before sowing, the average area of ground that would be occupied by each plant in a crop of barley. Describe, briefly, the observations and experiments you would carry out to obtain the information needed.

Show how you would make the calculation if you had the information you have listed.

What observations would you carry out on the growing crop to check the accuracy of your result? (20)
4. Name the three constituents which make up the greater part of the dry matter of the food of animals. State the changes which take place in each during the process of digestion and indicate in which part of the alimentary canal each change takes place.

With the help of labelled diagrams compare the alimentary canal of the sheep with that of the pig, and relate differences in structure to differences in the diet of the two animals.

5. Distinguish between secretion and excretion.

Name the organs by which waste matter is eliminated from the body of a specified farm animal. Briefly describe the functions of each organ, stating the nature of the waste matter and its origin in the body.

Discuss the agricultural use and value of bodily wastes.

6. Write notes about four of the following:—

   British Friesian cattle; tuberculosis; control of weeds; parasitic worms in sheep; wireworm; potato blight.

7. State Mendel’s Laws of inheritance and explain them in terms of genes and chromosomes.
1. State the meanings of the terms annual and biennial as applied to garden plants and give two examples of each. (8)

A flower bed is to be occupied, during as much of the year as possible, by two kinds of bedding plants grown in succession. Name two bedding plants which would be suitable and the months during which each would occupy the bed. Describe in detail how one of the plants would be grown before being planted out. (12)

2. Sketch and describe an experiment which indicates how water is taken in by the roots of a plant. State the results you would expect to obtain and explain them. (8)

How does a plant lose water? State the atmospheric factors which influence loss of water and explain the operation of each. (12)

3. Explain what is meant by vegetative propagation and state its horticultural advantages and disadvantages as compared with propagation by seeds. Name two natural methods of vegetative propagation used in horticulture and give an example of each. (12)

With reference to a labelled diagram, describe how a new gooseberry bush is normally produced from an existing bush. How does the method of producing a new blackcurrant bush differ from the one you have described? Explain why. (8)
4. Describe an experiment which a gardener might perform to find at what
distances carrots should be spaced to produce the maximum weight of crop. (11)

Give an account of the life history of the carrot fly, the damage which it causes
and suitable means of control. (9)

5. Under the following headings describe how a good crop of winter cabbages
should be grown:

preparation of the soil; growing and planting seedlings; manuring;
control of weeds and pests. (20)

6. What useful purposes are served by humus in a garden soil? (5)

Describe how you would make a compost heap and explain what should be
done to promote the process of decomposition. (9)

Name the other main constituents of soil. Describe an experiment by which
their presence could be demonstrated. (6)

7. What are the advantages and disadvantages of garden hedges? (6)

Name two kinds of plants which are commonly used to make garden hedges. Select one of them and describe how it should be grown, planted and tended to
make a good hedge. (14)

8. Name two foods stored by plants. Select one of them and state in which part of the plant it is made, what it is made from, and how it is transported to
the place of storage. (8)

Name three kinds of plant storage organs and for each name a garden plant
which stores food in that way. Make a labelled sketch of one of these storage organs and state the use made by the plant of the stored food. (12)
SCIENCE

Physics
Ordinary Grade

Monday, 13th May—9.30 a.m. to 12 noon

Answer any FIVE questions.

Answers should, where appropriate, be illustrated by clear diagrams of reasonable size.

Mathematical tables are provided.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.

1. (a) State the freezing point and boiling point of water on the Fahrenheit and Centigrade scales. Give reasons why water does not always boil at the temperature stated. Name one appliance in which an increased boiling point can be obtained.

(b) Draw a labelled diagram of a vacuum flask. Explain how it keeps ice-cream cold.

(c) Draw a solenoid through which an electric current is flowing. Mark clearly the direction of the current, the position of the north and south poles, and trace two complete lines of force. Name two of the factors which affect the strength of an electro-magnet.
2. State the Principle of Moments. Describe how you would set up a system of four non-parallel forces in equilibrium. How would you use this apparatus to verify the principle of moments?

The bar AB of the weighing machine shown in the sketch is $2\frac{1}{2}$ ft long and weighs 20 lb; the point of suspension C is 2 in from end A, and the centre of gravity of the machine is 1 ft from the same end. If the movable weight is 10 lb, what is the maximum load that can be weighed? What change would you have to make to this machine if you wished to weigh approximately 500 lb?

3. Define the coefficient of static friction between two surfaces, and describe how you would determine it experimentally.

A crate and contents weighing 2 cwt can be pulled along a horizontal floor at a steady speed by a horizontal force of 56 lb wt. Calculate the force required to keep the crate moving when an extra 1 cwt is added to it. What work is done in the latter case when the crate is pulled a distance of 30 ft?

If, to the crate weighing 3 cwt, a force of 1 cwt wt is applied upwards at an angle of 30° to the horizontal, what is the normal reaction?

4. (a) State Boyle’s Law and describe an experiment to verify it.

(b) On a morning when the temperature is 12°C a tyre contains air at a pressure of 28 lb per sq in. When the temperature rises to 30°C the tyre expands in volume by 1 per cent. What is the new pressure of the air in the tyre?

(c) In the sketch of a steam safety valve mechanism shown opposite, AB is a light steel rod pivoted at A. The light valve D has a surface area of $\frac{3}{4}$ sq in. What load should be hung at B if the maximum steam pressure is to be 24 lb per sq in?
5. (a) Define the **British Thermal Unit**.

Describe an experiment to find the temperature of a bunsen flame. 

(b) A boiler contains 1000 lb of water at 32°F. How much heat is needed to raise the temperature of the water to boiling point? What will be the cost of heating at 2s. 6d. per therm if the heater is 75 per cent efficient?

1 therm = 100,000 B.Th.U.

(c) The temperature of 500 lb of water in a tank is raised from 56°F to 96°F by pumping in 25 lb of steam at the boiling point of water. What is the thermal capacity of the tank?

Latent heat of steam = 972 B.Th.U. per lb

6. How would you measure the focal length of a convex lens?

What is the difference between a real and a virtual image? Draw diagrams showing how a convex lens of focal length 2 in can form (i) a magnified real image, and (ii) a magnified virtual image. Where should the object be if the lens is to form a diminished image? Is this a real or a virtual image?

What type of lens is in the eye, and what is the nature of the image it forms? Explain why the eye can focus near and distant objects clearly.

7. (a) Explain why you are able to hear a note when a vibrating tuning fork is held at a short distance from your ear. On what does the pitch of the note depend?

(b) Describe an experiment with a vibrating tuning fork to show resonance in an air column.

(c) Sketch the apparatus you would use to investigate the notes produced by a stretched string and write a brief note on the purpose of the various parts of the apparatus.

(d) A sonometer with a stretched wire of length 36 cm is tuned to a frequency of 330 vib per sec. Explain (i) what you would hear if the vibrating wire were touched at its middle point and (ii) how you would produce a note of frequency 440 vib per sec.

8. [Turn over]
8. Describe how you would find as accurately as possible the resistance of a given coil of wire.

How does the resistance of an ammeter differ from that of a voltmeter? What is the reason for the difference? How may an ammeter be adapted to measure a larger current?

A circuit is fitted up as shown below, the battery having a negligible internal resistance. When the key is closed, what is (i) the total current in the circuit, (ii) the p.d. across each resistor, (iii) the current in the 60 ohm resistor?

9. (a) State two advantages which a lead accumulator has over a Leclanché cell. State two of the major precautions to be observed in using an accumulator, and write a brief note on two methods of testing an accumulator to see if it needs recharging.

(b) AB is a loose strip of aluminium hanging between the poles of a horse shoe magnet. How does it move when the key K is closed? How would you make the strip move in the opposite direction? State the law which you are applying.

(c) In this diagram the coil of wire ABCD is free to rotate about the axis PQ. Explain how the coil moves when key K is closed. What would be done to make the movement continuous?
SCIENCE

Alternative Physics

Ordinary Grade

Monday, 13th May—9.30 a.m. to 12 noon.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read. Mathematical tables are provided.

$g = 981$ cm. per sec. per sec.

SECTION I

Answer any NINE questions.

Answers should be as brief as possible; in most cases a sentence or two will suffice. Candidates are advised to spend about one hour on this section.

Each question carries 5 marks.
1. An aneroid barometer is to be used as an altimeter. It reads 75 cm at ground level. At what height would it read 74 cm, assuming the temperature is unchanged?

   Density of mercury = 13.6 gm per c.c.

   Density of air at the given temperature = 1.29 × 10⁻³ gm per c.c.

2. A quantity of true gas is heated in a closed container from temperature A to temperature B, so that the pressure doubles. Quote a possible pair of values for A and B.

   Why does the pressure increase with the rise in temperature?

3. How are cloud chamber tracks formed?

4. The area of cross-section of the barrel of a bicycle pump is ½ square inch. What force is necessary to pull out the plunger against an air pressure of 15 lbs per square inch?

   How much work is done in moving the plunger six inches?

   Or

   A clockwork motor will lift a 50-gram weight through a vertical height of 20 cm before the spring runs down. What potential energy does the spring store if the motor is 75 per cent efficient?

5. Make (a) a ray diagram (b) a wave diagram, to illustrate reflection of light from a distant source by a plane mirror.

   What is the relation between the incident ray and the incident wavefront?

6. An ammeter in a circuit through which a steady current is maintained has a shunt in the form of a variable resistance connected across its terminals. The value of this shunt is adjusted until the ammeter reading is halved. Explain how this permits the resistance of the ammeter to be determined and sketch a possible circuit.

7. Sketch the apparatus used to show that sound cannot travel across a vacuum and label the important items of equipment.

   Why cannot sound pass through a vacuum?

8. Successive photographs of a freely falling body on the moon’s surface might give the following readings:

   \[
   \begin{array}{cccc}
   \text{Time of fall (sec)} & 0 & 1 & 2 & 3 \\
   \text{Total vertical distance dropped (ft)} & 0 & 2\frac{2}{3} & 10\frac{2}{3} & 24 \\
   \end{array}
   \]

   What is the final downward velocity after three seconds? What acceleration does this represent?
9. Explain how, on the kinetic model, change of state can be effected without change in temperature, although it is a common observation that a rapidly evaporating liquid suffers a consequent drop in temperature.

10. How could you, by electrical tests, identify the two electrodes of a diode valve? Explain.

11. Name two regions within the electro-magnetic spectrum but outside the visible range easily studied in the school laboratory. Make a labelled sketch showing how you would verify the law of reflection within one of these regions.

12. Describe briefly a sensitive form of electroscope which could be used to compare the strengths of two radium sources.

SECTION 2

Candidates are advised to spend about 1½ hours on this section. Only THREE questions should be attempted from this section. Each question carries 18 marks. Diagrams of apparatus should be drawn wherever appropriate.

1. State the principle of the conservation of momentum.

Describe and explain a method of verifying this principle by experiment.

A billiard ball of mass 100 gm moving at a steady 10 cm per sec hits a second equal but stationary ball head on.

If no kinetic energy is lost in the collision, what happens to each ball?

In practice perhaps one-quarter of the original kinetic energy would be lost in the collision. Express this fact as an equation using the symbols \( V \) and \( W \) for the final velocities of the first and second balls—\textit{but do not solve}.

2. List three different physical effects which show that matter is very fine-grained or alternatively continuously divisible. Next describe in detail one experiment that suggests that there is a limit to the extent to which matter can be divided.

Given that Avogadro’s number is \( 6 \times 10^{23} \) and that the gram-molecular volume of any gas at N.T.P. occupies 22.4 litres, calculate the average distance between the centres of the gas molecules under these conditions.

How can the gas pressure appear to be constant if the molecules have different speeds?

Page three
3. Describe and explain one method of determining $J$, the mechanical equivalent of heat.

Why is converting heat into mechanical energy, as is done in steam engines or in internal combustion engines, usually a less efficient process than converting mechanical work into heat as in the above experiment?

A small heating coil of 10 ohm resistance is inserted into a hole drilled half-way into a 500 gm block of copper, and this in turn is packed into a well-insulated box of negligible thermal capacity. A steady current of 1.5 amps is passed for exactly 3 mins. Calculate the temperature rise if the specific heat of copper is 0.1 cal/gm. Assume zero heat loss and no rise in coil resistance with temperature, and that $J = 4.2$ joules per calorie.

4. Describe an experiment with water waves to show how a convex lens focuses an incident plane wave.

Make a labelled sketch to illustrate the optical action of a compound microscope.

If such a microscope is used to observe Brownian movement describe how the moving particles are illuminated.

5. Give sketches of (a) the magnetic field surrounding a straight vertical wire carrying current, (b) a horizontal section through the magnetic field surrounding a vertical circular coil carrying current. Show direction of the lines of force and state clearly whether your current directions refer to conventional current or to electron flow.

What steps are taken in a moving coil meter to secure a uniform scale?

A milliammeter records 100 milliamps full-scale deflection and has an internal resistance of 10 ohm. How would you convert this into a 0-to-3 volt voltmeter? What serious limitation would such a voltmeter have?

6. Describe how you would show the existence of two kinds of electric charge.

State the inverse square law for force between two electric charges and describe an experiment to verify this law.

A negatively charged rod is brought near an uncharged electroscope. The leaves separate. What charge is on the leaves? The collecting disc of the electroscope is now momentarily earthed and the rod is moved further away. Now what charge is on the leaves? Explain what has happened.
Answer any FIVE questions.

Answers should be supplemented by equations wherever possible, and should be illustrated, where appropriate, by clear diagrams of reasonable size.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.

Atomic numbers and approximate values of Atomic weights will be found in the book of Mathematical Tables.

1. (a) What is the effect of adding dilute hydrochloric acid to a mixture of iron filings and sulphur (i) before heating the mixture, (ii) after heating the mixture? (4)

(b) Write a brief note, without equations, on the ease with which calcium, copper, and zinc combine with oxygen. What would be the result of adding zinc to a solution of copper sulphate, and to a solution of calcium chloride? (7)

(c) Write the chemical formulae for (i) caustic soda, (ii) ammonium sulphate, and state one important use of one of these substances. (3)

(d) Describe two experiments to show that sugar contains carbon. Why is sugar an important constituent of our diet? (6)

2. (a) How would you show experimentally the conditions necessary for the rusting of iron? Explain where rusting would be most noticeable in jetties with iron frameworks. (10)

(b) Outline two experiments with sulphur and magnesium to illustrate differing chemical properties of non-metals and metals. State two physical properties of mercury which indicate that it is a metal. (10)
3. How would you prepare carbon dioxide, and from it a pure sample of carbon monoxide?

   Name two gases present in the exhaust fumes of a petrol engine, and explain their presence.

   What is coke, and how is it manufactured? What are the advantages of using coke instead of coal as a fuel?

4. How would you prepare and collect sulphur dioxide?

   Outline the preparation of sulphuric acid from sulphur dioxide.

   If only 90 per cent of the sulphur dioxide used can be converted into sulphuric acid, what weight of sulphur is needed to produce the gas for 180 tons of sulphuric acid?

5. How would you prepare and collect chlorine, starting from common salt?

   State two common uses of this gas, and write a note on the chemistry involved in one of those uses.

   How would you show the reaction of chlorine with (i) potassium bromide, (ii) iron? For each reaction, describe what you would see, write the equation, and state the type of reaction.

6. (a) With the aid of a labelled sketch describe the electrolysis of water. Name the products and the electrode at which each is liberated.

   (b) Outline a method of obtaining hydrogen from water and an element.

   (c) How would you show the presence of hydrogen in coal gas?

   (d) State three uses of hydrogen.

7. Draw a diagram to illustrate the structure of an atom of sodium and comment on the valency of the element.

   10 gm of an oxide of copper on reduction gave 8.9 gm of copper. Calculate the equivalent of copper. Write the formula for this oxide. Describe how you would carry out such an experiment.

8. How would you prepare and collect nitric acid?

   Describe the reaction of nitric acid with carbon. How would you identify the two gaseous products? Write a note on the oxidation and reduction that has occurred in this reaction.

   Name two methods of preparing nitrates from nitric acid, and write an equation showing an example of each.
SCIENCE

Botany
Ordinary Grade

Wednesday, 1st May—9.30 a.m. to 12 noon

Answer any FIVE questions.

Answers should be illustrated by labelled diagrams of reasonable size wherever these help to clarify the answers.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.

1. Make a labelled drawing of the half-flower of a named member of the Leguminosae.
   Outline the changes which take place in the gynoecium after fertilisation as it ripens to form a fruit.
   Describe the structure of a named leguminous seed.
   How are the growing points of a pea or bean seedling protected in the early stages of germination? (6)

2. Describe the path of the transpiration current from start to finish in a young dicotyledon.
   How would you show experimentally the strong pull of transpiring leaves? (10)
   When might transpiration be harmful to plants and why? (6)
3. A well-watered plant kept in darkness decreases in dry weight, but a similar plant growing in light increases in dry weight. Explain these happenings and write a short account of the processes in the plant to which they can be traced. (20)

4. Name three garden plants each of which illustrates a different mode of vegetative reproduction and describe these methods. Discuss possible advantages and disadvantages of vegetative reproduction as compared with reproduction by seeds. (12)

5. Four unlabelled microscope slides are known to be transverse sections of—
   - a monocotyledon stem
   - a dicotyledon stem
   - a monocotyledon root
   - a dicotyledon root

   What features would enable you to identify each of the sections? (Detailed drawings are not required.) (12)

   What is a possible advantage of the arrangement of the vascular tissue in the dicotyledon stem? (3)

   Write notes on (i) cambium, (ii) phloem vessels. (5)

6. Trees may be identified by their leaves, by their fruits, and by the appearance and arrangement of their winter buds. Select three of the following trees, for each make drawings to show these features and mention a further recognition character:
   - apple, ash, beech, birch, horse-chestnut, lime, oak, rowan, sycamore. (20)

7. Describe, briefly, a habitat which you have studied throughout a year and list the plants you have seen growing. State which plants were the most common and suggest reasons for their success in that particular habitat. (20)

8. Describe experiments to show the response of a root to gravity and to water and to show the region in which response takes place. What part do these tropisms play in the life of a plant? Write a note on movements shown by certain climbing plants. Refer to named plants. (15)
SCIENCE

Zoology

Ordinary Grade

Wednesday, 1st May—1.30 p.m. to 4 p.m.

Answer any FIVE questions.

Answers should be illustrated by labelled diagrams of reasonable size wherever these help to clarify the answers.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.

1. Draw a large labelled diagram of Amoeba. Describe how this animal performs the activities characteristic of living organisms. How does it survive if its habitat dries up? (20)

2. Why is Hydra regarded as a very simple animal? (4)

What functions are performed by the tentacles of Hydra? Draw and label a diagram to show the structure of one of these tentacles. How does their structure enable them to carry out their functions? (16)

3. Select one of the following groups:—
   birds of a specified habitat, e.g. seashore, town;
   invertebrates of a garden;
   pond insects;
   animals of a rock pool.

Describe the appearance and habits, as observed by you during your field studies, of any four examples from your chosen group. (20)
4. Describe experiments by which you could demonstrate
   (i) the action of ptyalin.  
   (ii) the effect of animal respiration on the carbon dioxide content of the air.  
   (iii) a reflex action in man. Describe the sequence of events in a reflex action.  

5. State the route followed by the blood of a mammal from its entry into the heart from the main circulation round the body until it leaves the heart to start again on this circulation. How does the structure of the heart enable the blood to follow this route and to keep moving?  
   Explain the increased rate of heart beat during violent exercise.  
   What part does the blood play in excretion?  

6. The external coverings of fishes, birds, and mammals are characteristic features of these groups. Write notes on the nature of these external coverings, the various functions they perform, and how they are adapted to carry out these functions.  
   Explain briefly how the lack of external covering enables the skin of a frog to perform another function.  

7. and 8. These questions are printed on separate sheets of paper on which you are requested to write your answers. When completed, pin the sheet(s) inside your answer book.  

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1963

SCOTTISH CERTIFICATE OF EDUCATION

SCIENCE

Biology

Ordinary Grade

Wednesday, 1st May—9.30 a.m. to 12 noon

Answer any FIVE questions.

Answers should be illustrated by labelled diagrams of reasonable size wherever these help to clarify the answers.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.

Marks

1. This question is printed on a separate sheet of paper on which you are requested to write your answer. If you attempt this question, pin the sheet inside your answer book, when completed. (20)

2. Name an insect-pollinated flower and make a labelled drawing of the flower cut lengthwise. Describe briefly how pollination is effected.

Outline what happens from the time a pollen grain is deposited on the stigma until fertilization has occurred.

What experiments would you carry out to show the part played by the stamens in the production of the fruit? (8)

3. What gases enter and leave a leaf through the stomata when photosynthesis is proceeding rapidly? Give reasons for your answer.

With the aid of diagrams describe guard cells and say how their structure enables them to control the opening and closing of the stomata.

Describe an experiment to find out whether there are more stomata on one side of a leaf than the other. (11)

[ 101 ]
4. What are the properties of a good garden soil? In what ways do animals and plants, excluding bacteria, aid in the formation of such a soil? Describe experiments by which you might compare (i) the acidity, (ii) the humus content of two samples of garden soil.

5. Why is oxygen necessary for life? Describe an experiment to show that a green plant is taking up oxygen. How does oxygen reach the cells inside (i) a root, (ii) a tree trunk in winter. State the properties of the human lungs which make them efficient organs of respiration.

6. State where food is stored in (i) a named plant, and (ii) man. In each case name the foods stored. What other foods may be stored by plants? Describe tests by which you could identify any two of the foods. What uses are made by plants and by man of their respective foodstores?

7. Where are the following found in a mammal? Give a brief description of each and say what part it plays in the working of the body:—

- pelvic girdle
- semi-circular canals
- villi
- gall bladder

8. Describe what you have observed of the appearance and habits of any two of the following:—

- a named fish in your aquarium
- an earthworm
- a named caterpillar during the period from hatching to pupation.

On what does a frog feed and how does it secure this food?
SCIENCE

Physics
Higher Grade—(Paper I)

Monday, 13th May—9.30 a.m. to 12 noon

Answer any FIVE questions.

Answers should, wherever appropriate, be illustrated by clear diagrams of reasonable size. Mathematical tables are provided.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.

Assume \( g = 32 \text{ ft per sec per sec or } 981 \text{ cm per sec per sec.} \)

1. State the conditions which must be satisfied if a body is to be in equilibrium under the action of three co-planar non-parallel forces. Describe in detail an experiment to verify these conditions.

A drawbridge, \( AB \), is 20 ft long, weighs 30 tons, and its centre of gravity is at its mid-point. The lifting cables pass over pulleys at \( C \), 20 ft above the pivot, and are fastened to the far end of the bridge. What is the total tension in the lifting cables as the bridge starts to lift from the horizontal position?

Explain whether the tension in the cables increases or decreases as the bridge is being raised.
2. State Newton's Second Law of Motion and show how the unit of force in the f p s system is derived from it. (5)

Describe the experiment you would do to show how the acceleration produced in a body is related to the applied force. (7)

A motor car weighing one ton is accelerated from rest to 30 mph in 5 seconds; assuming the power of the engine to be uniform and neglecting frictional losses calculate (i) the required horsepower of the engine; (ii) the maximum slope up which this motor car could maintain a steady speed of 30 mph. (8)

3. Define pressure at a point in a fluid. Show how the Principle of Archimedes may be deduced from consideration of pressure in a fluid. (7)

Why does the pressure in the atmosphere not depend on height in a simple way? (5)

Given a solid cube of brass and a cylinder of the same brass suspected of containing a small cavity, how would you determine the volume of the cavity, if any? (5)

A polythene bag is sealed when it contains 1 litre of air at atmospheric pressure, and is placed under water at the same temperature as the air. Assume that the dimensions of the bag are negligible compared with the depth considered. If the bag is 1700 cm below the surface of the water would it resurface or not if attached to a lead alloy sinker of mass 420 gm? State two of the difficulties ignored in making the assumption stated above. (8)

Weight of polythene bag = 1 gm.
Atmospheric pressure = 75 cm of mercury.
Density of lead alloy = 10 gm per cc.
Density of mercury = 13.6 gm per cc.
Density of air = 1.25 gm per litre at atmospheric pressure and at temperature of the experiment.

4. Define specific heat and mechanical equivalent of heat. (4)

In finding the specific heat of iron by the method of mixtures, what are the two major sources of error? How do you minimise these errors? Discuss the effect each would have on the value of the specific heat determined by the experiment if no precautions were taken. (7)

If in finding the latent heat of steam by passing steam into water, the steam was not dry, state with reasons the effect this would have on the final result. (3)

If a 1 kilowatt electric kettle containing 1 litre of water at 20°C has electrical energy supplied for 10 minutes how much water will be boiled away assuming a 10 per cent loss of heat?

\[
\mathcal{J} = 4.2 \text{ joules per cal} \\
L = 540 \text{ cal per gm}
\]
5. (a) Explain the terms total reflection and critical angle.
Describe an experiment to determine the critical angle for an air-perspex interface. If the critical angle is found to be 40.8° what is the value of the refractive index air to perspex?
A beam of light strikes the mid-point of one side of a square slab of glass of side 4 in. If the beam is at an angle of 30° to the side of the square, trace the path of the beam through the glass, and state the point at which the beam emerges and its angle of emergence.

\[ \frac{\text{air}}{\mu_{\text{glass}}} = 1.5 \]

(b) The focal length of a thin bi-convex lens is 20 cm. Find, from a carefully drawn diagram, how far from the lens an object must be placed if the image is to be erect and twice the height of the object.

6. Account for the production of sound by a vibrating tuning fork.
What do you understand by beats? Explain carefully how they occur.
You are given two tuning forks. One, which is marked C, gives a true middle C. The other is very slightly different. How would you determine experimentally how much this second fork was off tune and whether its note was higher or lower than true C?
The wire of a horizontal monochord, supported on two bridges 1 metre apart, weighs \(2 \times 10^{-3}\) gm per cm and is held taut by a weight of 2 kg hanging vertically from a frictionless pulley. A third bridge is inserted and adjusted to make one segment of the wire sound middle C (frequency 256) when plucked. With what frequency does the other segment sound?

7. With the aid of a diagram describe the principle on which a moving-coil galvanometer works.
Give details of the experiment you would perform to calibrate a moving-coil ammeter.
A sensitive moving-coil galvanometer has a resistance of 200 ohms and gives a full-scale deflection for a current of 0.005 amp. How can you adapt this instrument to act as

(i) an ammeter of range 0–1 amp?
(ii) a voltmeter of range 0–10v?

8. Define the coulomb and the volt.
Sketch the circuit you would use to determine the resistance of a wire and discuss the two possible positions of the voltmeter.
Draw the electric circuit wherein 8 cells each of internal resistance 0.5 ohm and e.m.f. 2v are connected in series with a lamp labelled 12v 6w and two resistance coils in parallel with each other. If one of the coils has a resistance of 6 ohm what must be the resistance of the other to maintain the lamp at its proper wattage?
If you wished to run two 12v 6w lamps from this battery what circuit would you use?

9. (TURN OVER)
9. (a) A long energised solenoid lies with its axis in the magnetic meridian and its north pole pointing north. Sketch the solenoid and the field of force, and show the direction of the current and the approximate position of any neutral points.

(b) ![Diagram of solenoid and galvanometer](image)

\(P\) represents a long solenoid closely wound on a hollow cardboard tube and connected in series to a rheostat, battery, and key. \(Q\) represents a smaller movable coil of many turns of fine wire the ends of which are connected by a flex to a sensitive centre-zero galvanometer \(G\). State the circumstances in which the sensitive galvanometer will show a deflection; in each case specify the direction of the current in coil \(Q\) and quote the law which you are applying.

(c) How would you use the apparatus to secure some information about the strength of magnetic field inside and outside the solenoid at various points on the axis? What would you expect to find?
Answer any FIVE questions.

Answers should, wherever appropriate, be illustrated by clear diagrams of reasonable size.

Mathematical tables are provided.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.

Assume $g = 32$ ft per sec per sec or $981$ cm per sec per sec.
1. Define the centre of gravity of a body.

(i) The diagram represents a model of mass \( W \) lb resting on a horizontal table and made of two squares of metal, each of side 6 in and thickness 2 in, joined together as shown. Where is the centre of gravity of the body? (5)

(ii) The body is tilted by applying a horizontal force at \( F \), the mid-point of the top edge CD. Discuss the changes in the potential energy of the body as it moves from the position shown until the face AD is horizontal. What assumption has been made about the value of the coefficient of statical friction between the surfaces of the body and the table? (10)

(iii) The coefficient of statical friction between the surfaces of the body and the table is 0.75. A gradually increasing horizontal force is applied at \( F \) in the direction AB when the body is in the position shown on the diagram. When and how will the body move? (5)

2. (i) Show how Newton's Second and Third Laws of Motion lead to the principle of conservation of momentum in a simple collision. (5)

(ii) The bob, of mass 2 lb, of a pendulum 13 ft long is pulled 5 ft to one side and then let go. What is the velocity of the bob at its lowest point? At that point it collides with a bob of equal mass suspended from a string of equal length and the two move on, after collision, in contact. Calculate and explain the energy change after collision. (6)

(iii) A mass of 20 lb is suspended from a sensitive spring balance fixed to the side of a lift. State the effects that would be noted on the recording of the spring balance as the lift moves from rest at the foot of the building to rest at the top and explain why these occur. If at one point the balance records 20.5 lb, what information can be derived about the motion at that instant? (9)
The diagram, which is not drawn to scale, shows an apparatus consisting of a capillary tube A dipping into mercury at B and connected through a pump chamber C (capacity 100 cc) to a long flexible tube containing mercury and connected to a movable reservoir R. A vessel V (capacity 200 cc) containing air is attached by the side tube at Y.

If air is to be evacuated from V by raising and lowering reservoir R, what is the minimum length of tube A? Describe in detail what happens in the parts A, C, and V of the apparatus in the first cycle of operations. What is the necessary range of movement of R to evacuate V? (16)

Calculate how much of the air should be extracted from V after 4 cycles of operation. How would you check the efficiency of the pump at this stage? (4)
4. (i) Outline briefly an **accurate** method of determining directly the **real** coefficient of cubical expansion of a liquid. Discuss fully the theory underlying the calculation.

(ii) A wire of metal alloy is of the same dimensions as a thread of mercury in a capillary tube of quartz which has a negligible coefficient of expansion. The mercury in the tube is heated through 10 Centigrade degrees. Through what range of temperature should the wire be heated to produce the same change in length, if the coefficients of cubical expansion of mercury and the alloy are the same? Comment on your answer.

(iii) At 15°C a small-bore glass tube of cross-section area 0.01 sq cm has its length marked off correctly in centimetres. It contains a thread of mercury of length 20 cm at 15°C. If the tube and contents are warmed to 65°C, what is the reading of the length of the mercury thread on the scale, and what is its true length?

- Coefficient of linear expansion of glass = \(0.9 \times 10^{-5}\) per degree C.
- Coefficient of cubical expansion of mercury = \(1.8 \times 10^{-4}\) per degree C.

5. (i) What principles underlie the drawing of rays when solving problems graphically for lenses or mirrors?

(ii) A converging lens throws an image 5 cm high on a screen. If the light falling on the screen is intercepted by a convex mirror, radius of curvature 40 cm, aligned on the same optical axis but placed 10 cm in front of the screen, find graphically or otherwise the size and position of the final image. State with reasons whether the final image would be erect or inverted with respect to the original object.

(iii) A man wearing spectacles, with the lenses concave towards him, closes one eye and looks just to one side of a bright window from inside the room. He sees a magnified upright virtual image of his eyelashes silhouetted against a dim patch of light. On pushing the lens slightly towards his eye the dim patch of light becomes a diminished upright virtual image of the window. Give a possible explanation of the formation of these images in terms of reflections from the spectacle lens, the eyeball, or both.

6. The resistivity of copper is \(1.78 \times 10^{-8}\) ohm per cm cube at 17°C. Explain clearly why the definition is stated in this way.

What length of copper wire of diameter 0.012 cm is required to make a coil of resistance 35.6 ohms at 17°C?

If you were asked to determine experimentally the resistance of this coil of wire at 0°C, 50°C, 100°C, comment on the difficulties you would expect to meet and explain how you would overcome them.

The following results were obtained for this coil:

<table>
<thead>
<tr>
<th>Temperature in °C</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance in ohms</td>
<td>33.5</td>
<td>35.0</td>
<td>35.0</td>
<td>37.2</td>
<td>38.5</td>
</tr>
</tbody>
</table>

Graph these results and state the change in resistance between 15°C and 35°C.

The coil of copper wire is joined in series with a circuit at terminals A and B. Assuming that the resistance of manganin does not change with temperature, how would you use a variable manganin resistor to ensure that the resistance between A and B was the same at 35°C as it had been at 15°C?
7. A simple cell, a key, and a copper voltameter are connected in series to form a circuit. Discuss, as fully as you can, the transport of electricity through the circuit when the key is closed.

If the mass of the zinc plate in the simple cell is reduced by 0.1 gm during this experiment, calculate the other gravimetric changes which have taken place in cell and voltameter.

Given that 1 gm of zinc liberates 580 calories of heat when reacting with dilute sulphuric acid, calculate the e.m.f. that might be expected from the simple cell, assuming that all the heat energy of the reaction is available as electrical energy.

\[ J = 4.2 \text{ joules per calorie.} \]
\[ \text{e.c.e. hydrogen} = 1.04 \times 10^{-5} \text{ gm per coulomb.} \]
\[ \text{equivalent of zinc} = 32.5. \]

8. (i) State the formula for the force on a straight conductor carrying an electric current and at right angles to a uniform magnetic field, and draw a diagram to show unambiguously the directions involved.

(ii) Explain why you would expect an e.m.f. to be induced in a straight wire moving perpendicular to its own length and at right angles to a magnetic field. Derive an expression for this induced e.m.f.

(iii) Sketch a simple form of generator with a rectangular coil in a uniform magnetic field and show how to calculate the instantaneous e.m.f. induced in the rotating coil at any instant. Comment on the positions where the e.m.f. is at a maximum and a minimum.

(iv) Calculate the maximum e.m.f. induced in a rectangular coil of 100 turns of wire and measuring 10 cm by 6 cm which rotates 40 times per second about a central axis parallel to the longer side and at right angles to a field of magnetic flux density 1,000 lines per sq cm.
1. Define the term equivalent weight.

Describe an experiment to find the equivalent weight of copper starting from the metal. Mention two other ways of determining the equivalent of copper.

0.414 gm of a metal give 0.446 gm of the metal oxide. Calculate the equivalent weight of the metal. If the specific heat of the metal is 0.03 calculate the minimum molecular weight of the metal oxide.

2. State the important physical properties of acetic acid. Outline two methods of preparing sodium acetate.

Describe an experiment to show the reaction between ethyl alcohol and acetic acid, and comment on this reaction.

How would you show experimentally that alcohol contains carbon and hydrogen?
3. Describe the method you would use to prepare pure dry hydrogen iodide in the laboratory.

Hydrogen iodide reacts with sulphuric acid. Give as full an account as you can of the reaction, stating the property of hydrogen iodide illustrated.

Given an aqueous solution of sodium chloride suspected of containing a little sodium iodide, describe two ways in which you could test for the presence of the iodide.

4. Define the equivalent weight of a salt.

Describe in detail how you would determine the equivalent weight of calcium carbonate by volumetric analysis.

1.54 gm of a sample of anhydrous sodium carbonate was exactly neutralised by 23.1 cc of 1.1 N hydrochloric acid. Calculate the percentage purity of the sample assuming the impurities do not react with hydrochloric acid. What weight of this sample would neutralise 100 cc of N hydrochloric acid and what volume of carbon dioxide at N.T.P. would be liberated?

5. Write the equation for the usual preparation of hydrogen sulphide. What impurity is usually present and why? How would you prepare a pure sample of the gas?

Describe an experiment to determine the volumetric composition of hydrogen sulphide.

Describe and discuss the reactions of (i) hydrogen sulphide, and (ii) sulphur dioxide with potassium permanganate or potassium dichromate. For each gas write the equation of another reaction illustrating the property shown here.

6. Describe experiments to show the effect of heat on (i) nitric acid, (ii) ammonium nitrate. In each case describe how you would identify the gaseous product(s).

A sample of nitrogen dioxide is heated in a closed vessel to 600°C. Describe and explain what happens as the vessel and its contents are cooled from 600°C to 0°C.

Give a full account of the effect of adding a freshly prepared aqueous solution of ferrous sulphate to an aqueous solution of nitrogen dioxide.
7. Draw a diagram to show the atomic structure of aluminium. State two inferences you can make from the arrangement of its electrons.

Describe with essential details the process used for the extraction of aluminium from bauxite. Why is the process used for the extraction of iron unsuitable for aluminium?

Aluminium reduces ferric oxide but aluminium, unlike iron, does not require paint to protect it from the atmosphere. Explain this apparent contradiction.

8. How would you prepare reasonably pure specimens of
   (i) sodium bicarbonate from sodium carbonate,
   (ii) lead sulphate from lead,
   (iii) ferric chloride from ferrous chloride,
   (iv) zinc oxide from zinc sulphate?
Answer any FIVE questions.

Answers should be supplemented by equations wherever possible, and should be illustrated where appropriate, by clear diagrams of reasonable size.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.

ATOMIC NUMBERS AND APPROXIMATE VALUES OF ATOMIC WEIGHTS WILL BE FOUND IN THE BOOK OF MATHEMATICAL TABLES.

1. Describe the structure of the two allotropes of carbon and relate this to their properties.
   Describe the electronic structure of carbon tetrachloride and sodium chloride. Relate the physical properties of the two compounds to these structures.
   An ester with vapour density 37 was found to contain 48.6 per cent by weight of carbon and 8.1 per cent of hydrogen. Calculate the molecular formula of this ester and write the structural formulae for two possible isomers.

2. Outline the reactions in one process for the large-scale manufacture of sulphuric acid and discuss the factors which affect the yield.
   Give an account of the role of sulphuric acid in the electrolysis of water. Describe a quantitative experiment to confirm the final state of the solution.
3. The standard for atomic weights has been changed from hydrogen to oxygen to carbon. Write a note on the reasons for these changes. (5)

The following table gives the gaseous or vapour density of a number of compounds of an element X and the percentage by weight of the element in each compound. Show how this can be used to calculate the probable atomic weight of X.

<table>
<thead>
<tr>
<th>Compound</th>
<th>Vapour Density</th>
<th>Percentage weight of X in compound</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14</td>
<td>42.9</td>
</tr>
<tr>
<td>2</td>
<td>38</td>
<td>15.8</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>85.7</td>
</tr>
<tr>
<td>4</td>
<td>29</td>
<td>62.1</td>
</tr>
<tr>
<td>5</td>
<td>37</td>
<td>64.9</td>
</tr>
</tbody>
</table>

Mention two methods of determining vapour densities and state the advantages and disadvantages of each. (8)

4. You are asked to determine by volumetric analysis the concentration of an aqueous solution of sodium hydroxide which is approximately decinormal. What substance would you choose as your standard and why? Write a note on the various factors which limit the accuracy of your determination and state the degree of accuracy you would aim to reach. (7)

25 cc of a solution containing a mixture of sodium oxalate (Na₂C₂O₄) and oxalic acid (H₂C₂O₄) required 17.3 cc of 0.98 N sodium hydroxide solution for neutralisation. What weight of acid was present in the solution? Complete precipitation of the resulting solution with calcium chloride and ignition of the precipitate with sulphuric acid gave 1.55 gm of calcium sulphate. Calculate the weight of sodium oxalate in the original solution. (13)

5. How may ammonia be obtained from nitrogen by a method other than direct synthesis? (4)

Describe an experiment to determine the volumetric composition of ammonia. (7)

Comment on the atomic structures of ammonia and the ammonium ion. Why is an aqueous solution of ammonia alkaline? (9)

6. Chlorine, bromine and iodine are said to form a triad of elements. Discuss this statement in terms of the chemical properties of these elements and their compounds and, where appropriate, of their atomic structures. (20)
7. Describe a chemical test to distinguish between ethylene and acetylene. (4)

How would you obtain samples of

(i) ethylene from acetylene, (4)
(ii) acetylene from ethylene? (6)

10 cc of a hydrocarbon were added to 100 cc (excess) of oxygen and the mixture exploded. A contraction in volume of 25 cc was noted. A further contraction of 20 cc was observed when the residual gas was treated with surplus caustic potash. Find the molecular formula of the hydrocarbon assuming that all measurements were made at room temperature and pressure. (6)

8. (i) Dry bleaching powder is heated strongly. Describe the tests you would apply, other than the test for a chloride, to establish the nature of the residue. (5)

(ii) Black stains on a silver egg spoon are removed by immersing the spoon in contact with a strip of aluminium foil in a solution of washing soda crystals. Give a possible explanation of this reaction. (5)

(iii) A colourless crystalline salt gives a yellow flame test. When heated, the salt gives a colourless gas which ignites a glowing splinter. What tests would you apply to identify the salt? (5)

(iv) Discuss the relative merits of tin-plating and galvanising as methods of protecting iron from rusting. (5)
Answer any FIVE questions.
Answers should be illustrated by labelled diagrams of reasonable size wherever these help to clarify the answers.
Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.
The value attached to each question, or to each part of a question, is shown in the margin.

1. Outline the process by which carbohydrates are synthesized by green plants.
   Give an account of the digestion, storage, and utilization of carbohydrates in the mammalian body. (10)

2. Write an account of the plant and animal life throughout the year in the habitat of which you have made a special study. Refer particularly to the inter-relationships of these plants and animals. (20)

3. What characteristics distinguish the growth of a plant from that of an animal?
   How would you measure accurately the elongation of the shoot of a potted plant over six hours? What would you expect to find if the experiment were repeated in the dark?
   What changes take place internally and externally as the stem of a sapling grows in girth and becomes the trunk of a tree? (5) (7) (8)
4. What are the chief differences by which the Rosaceae may be distinguished from the Ranunculaceae? Your answer should include a labelled diagram of the flower of a named member of each family. Write an account of the fruits of the Rosaceae.

5. Make labelled diagrams of (i) a transverse section of a dicotyledon leaf, including the mid-rib, (ii) part of the lower epidermis in surface view. Comment on the structure of the leaf in relation to transpiration. Describe an experiment to compare the rates of transpiration of a leafy shoot under different external conditions.

6. What is the general plan of the circulation of the blood in a mammal? Explain the changes in composition which the blood undergoes as a result of collecting, transporting and releasing various substances during its circulation round the body. Particular vessels and the organs they supply should be named.

7. Give an account of respiration in an earthworm and in a cockroach. Comment on the efficiency of these modes of respiration in relation to the activity of the animals. Contrast the ways in which body shape is maintained in an earthworm and in an insect and discuss the possible advantages of these different ways.

8. The feathers, endoskeleton, respiratory system, and certain muscles of a bird all show special features which aid it in flight. Discuss these adaptations.
1963

SCOTTISH CERTIFICATE OF EDUCATION

SCIENCE

BIOLOGY

Higher Grade (Second paper)

Wednesday, 1st May—1.30 p.m. to 4.0 p.m.

Answer any FIVE questions.

Answers should be illustrated by labelled diagrams of reasonable size wherever these help to clarify the answers.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.
1. Draw a labelled diagram of the urinogenital system of a female rabbit or other mammal, and indicate by a labelled arrow where the embryo develops. Outline the development of the embryo from the fertilized egg, commenting particularly on the ways it is protected and nourished. What special provision is made for the care of the young mammal after birth? Write a brief note on two examples of parental care shown by animals other than mammals. (5)

2. What do you understand by the biological term “cell”? By reference to Pleurococcus and Amoeba draw attention to the main differences between plant and animal cells. Show by means of annotated diagrams what happens during mitosis. Where in plants and animals would you find cells undergoing meiosis? Comment briefly on the significance of this process in the life-cycle of the organism. (2)

3. What are the characteristics of the Arthropoda? Select one member from each of three classes of this phylum and say how they differ in general structure. How may these differences be related to their modes of life? (20)

4. Give an illustrated account of root hairs and lateral roots. Write notes on osmotic pressure, turgor pressure, suction pressure and the relation between them. Discuss the importance of osmosis in the life of plants. (10)

5. For what main reason are the Gymnosperms thought to be less highly evolved than the Angiosperms? With reference to Scots pine and a named Angiosperm discuss resemblances and differences in their pollination, development of seed and dispersal of seed. (18)

6. What are hormones? Write an account of three of the hormones produced in the human body, explaining briefly how they act in co-ordinating the activities of the body. Describe an experiment which illustrates the action of a plant hormone. (15)

7. With reference to named plants and animals explain the terms symbiosis, parasitism, and saprophytism. Write a note on Pythium. Select an animal which is an endoparasite of man and point out how its general structure and life history are adapted to a parasitic way of life. (11)

8. Which famous biologists do you associate with the following:—vaccination, classification of plants and animals, natural selection, penicillin, circulation of the blood? Select three of these biologists and write a brief account of the work of each. (20)
1963

SCOTTISH CERTIFICATE OF EDUCATION

SCIENCE

Botany

Higher Grade

Wednesday, 1st May—9.30 a.m. to 12 noon

Answer any FIVE questions.

Answers should be illustrated by labelled diagrams of reasonable size wherever these help to clarify the answers.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.

1. Make fully labelled diagrams of a transverse section of any named young dicotyledonous root cut from the region where elongation has been completed, showing (i) the general arrangement of the tissues as seen under the low power of the microscope, (ii) representative cells and vessels from different regions of the root as seen under high power. (12)

In what ways does the apex of the stem (i) resemble and (ii) differ from the root apex? How does the absorbing surface of a root differ in structure from (i) the outer layer of a young stem, and (ii) the outer layer of a 3-year-old root? (8)

2. With the aid of labelled diagrams, describe the structure of the inflorescence and the flower either of any named member of the Compositae or of any named grass. (10)

You are given an unfamiliar flower. List and comment on observations you could make which would help you to determine its family. (10)

[105]
3. Make labelled diagrams to show the detailed structure of an antheridium, an archegonium, and a sporangium of any named fern.

On what parts of the plant would you find these structures?

How do the male gametes of a fern differ from those of an Angiosperm in their structure and in their behaviour?

4. A healthy shoot is cut from a green plant and placed with the base of its stem in water. A stream of atmospheric air is passed slowly over the leaves when the shoot is kept (i) in sunlight and (ii) in the dark, and the gas mixtures are collected and analysed. Draw up tables to show the types of change you would expect to find in the concentrations of all the gases present, before and after the gas stream passes over the plant. Include in the tables brief notes giving reasons for the changes.

Select one gas whose concentration declines as it passes over the plant in sunlight and show, with the aid of diagrams, where it enters the leaf. Explain briefly what happens to it inside the leaf.

5. What essential elements would you supply as salts, to a culture of *Spirogyra* growing in the laboratory? State the functions in the metabolism of the plant of any three of these nutrients.

Draw (i) a healthy vegetative cell of *Spirogyra* and (ii) the same cell after it has been placed in a strong solution of common salt. Account for any changes observed.

What additional nutrient would you provide for the culture of a fungus? Why does the fungus require this?

6. Principally by means of labelled diagrams, describe the external and internal features of the seed either of a broad bean or of a pea.

Account for the following:

(i) Fresh 5-day-old seedlings weigh more than the ungerminated seeds, but their dry weight is less.

(ii) Ungerminated seeds contain starch. After a week's growth in the dark, no starch can be detected in the original seed, but traces of starch are found in the young stem.

(iii) Young shoots bend towards the light, but fail to show this response if the tips of the shoots are cut off.

Describe an experiment which you could set up to find out what happens to soaked seeds which are deprived of oxygen, and comment on the probable result.
7. EITHER

(a) Describe the vegetation of a limited area which **you have studied personally**. Your description should include some reference to the frequency of distribution of different plants in the area, their times of flowering and fruiting, and the influence of insects or other animals on the plant life. **(15)**

What happens to the dead vegetation? **(5)**

OR

(b) Describe, with the aid of diagrams, any one named deciduous tree you have studied throughout the year. Sufficient details should be given to enable a reader to recognise the tree from your description of its leaves, its winter twigs and its fruits. **(8)**

What internal changes take place in the tree before its leaves are shed? How does oxygen get through the bark of the tree? How do hollow trees remain healthy? A branch is cut off the tree. What happens to the stump left on the tree? **(12)**
Answer any FIVE questions.

Answers should be illustrated by labelled diagrams of reasonable size wherever these help to clarify the answers.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question, or to each part of a question, is shown in the margin.

1. Make a labelled drawing to show the internal structure of a mammalian kidney. State briefly the function of the various parts.

What is the essential difference between excretion and egestion? How is excretion carried out in *Amoeba* and *Hydra*? (12) (8)

2. What is a brain?

Describe, with the aid of diagrams, the brain of the dogfish (or skate). In what ways does it differ from that of the rabbit (or other small mammal), and how far can these differences be related to the different modes of life of the two animals? (5) (15)

3. What are the difficulties of living on land compared with living in water? How far have the cockroach and the earthworm overcome these difficulties? (7) (6)

What part does the earthworm play in the life of a garden? (7)

[106]
4. Explain the terms; cell, tissue, organ, and organism. State which of these terms are applicable to (a) *Paramoecium*, (b) *Hydra*, and give your reasons. (13)
   What are the functions of salivary glands, thyroid gland and adrenal glands? (7)

5. What organs in the body of a mammal are specially concerned with regulating the condition of the blood? What functions do they carry out in relation to the blood? (10)
   State briefly the functions of the cellular components of mammalian blood. (4)

6. What do you consider is the significance of metamorphosis in a life history? (5)
   What changes (if any) occur in locomotion, feeding, and respiration during the life history of a frog? (10)
   In what structural features does a frog tadpole which has just lost its external gills, resemble and differ from a small trout? (5)

7. EITHER
   (a) Write an essay on Animal Migration, mentioning the importance of the migrations in the life of the examples you choose. (20)
   OR
   (b) What do you understand by the term “food chain”? Give an account of food chains which occur in a community of plants and animals which you have specially studied. To what extent do you think studies on food chains are of use to man? (20)
SCOTTISH CERTIFICATE OF EDUCATION

SCIENCE (ENGINEERING)

Applied Mechanics and Heat Engines

Higher Grade

Friday, 3rd May—2.0 p.m. to 4.0 p.m.

Candidates should attempt FIVE questions.

When candidates use a formula they must explain each symbol. Units must always be stated.

Take $\pi = \frac{22}{7}$, and $g = 32$ ft. per sec. per sec.

Square-ruled paper and four-place logarithmic tables are provided.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each part of each question is shown in brackets.
1. Figure 1 shows an indicator arm built up of three steel plates welded together, each plate weighing 0.1 lb. per sq. in. The arm is pivoted about the axis A and a balance weight of 10 lb., at the end of a cord attached to the pin B between the two end plates, keeps it in position against the stop C. Determine the force exerted by the arm on the stop—

(a) if the cord from B is horizontal; and

(b) if it is at an angle of 45°.

FIG. 1.
2. The pin-jointed bracket, outlined in Figure 2, is fixed to a vertical wall at points X and Y, and has forces acting on it as shown.

(a) Draw a force diagram for the frame, scale 1 in. = 1 ton, and from it determine the magnitude and nature of the reaction forces at X and Y, and the magnitude and nature of the forces in each of the three members attached to the joint X.

(b) If the middle member attached to X has a cross-sectional area of 0.75 sq. in., and a length exactly 5 ft. long marked off on it when unloaded, determine the amount and the nature of the change in this length when under load if Young’s Modulus for the material is 13,000 tons per sq. in.
3. (a) Figure 3 shows packing cases, each weighing 500 lb., sliding down a chute AB connecting two floors of a factory. The coefficient of friction is 0.3. If the cases pass the point A at 1 ft. per sec., determine:

(i) the velocity at which the cases pass point B;  (12)
(ii) the time taken for each case to descend from A to B.  (3)

(b) A shaft of 3½ in. diameter, running at a speed of 240 rev. per min., is supported by a bearing on which it exerts a force of 300 lb. If the coefficient of friction between shaft and bearing is 0.04, determine the horse power absorbed by friction.  (5)
4. The screw of a screw-jack has a square thread of \( \frac{3}{8} \) in. pitch. The load is raised and lowered by means of a combined screwed collar and worm-wheel, which engages with the screw and is turned by a single-threaded worm as shown in Figure 4. The worm-wheel has 15 teeth and the worm spindle is turned by a handle of \( 5\frac{1}{4} \) in. effective length. The law of the machine is found to be 

\[
P = 0.0025W + 2.5,
\]

where \( W \) = load lifted and \( P \) = effort required.

Calculate:

(a) the velocity ratio of the jack; \( (5) \)

(b) the effort required to raise a load of 3,000 lb.; \( (2) \)

(c) the efficiency at this loading; \( (3) \)

(d) the work done by the effort in raising this load a distance of 1 inch; \( (2) \)

(e) the effort required to lower this load a distance of 1 inch if the work done against friction is the same in both directions. \( (8) \)
5. (a) Make a sectional sketch of one type of fire-tube boiler indicating the position of the mountings usually fitted.

(b) A boiler is hand-fired with 490 lb. of coal per hour having a calorific value of 12,500 B.t.u. per lb. 3,500 lb. of steam are generated per hour, from feed water at 55°F at a pressure of 150 lb. per sq. in. and 92 per cent. dry. Determine the thermal efficiency of the boiler.

(c) Determine the increase in thermal efficiency if a feed-water heater and a superheater are fitted using the flue gases from the boiler, the former raising the feed-water temperature to 115°F and the latter raising the steam to a temperature of 500°F.

(d) Explain briefly how the thermal efficiency of a hand-fired boiler would be affected by admission through the fire-door of (i) too much air, and (ii) too little air.

\[
\begin{array}{cccc}
\text{p (lb. per sq. in.)} & \text{t°F} & \text{h (B.t.u.)} & \text{L (B.t.u.)} \\
150 & 366 & 338 & 856
\end{array}
\]

Specific heat of superheated steam = 0.5.

6. A travelling crane is fitted with a double-acting steam-engine having two cylinders each 8 in. diameter and a 10 in. stroke. The winding drum, keyed to the engine crankshaft, has an effective diameter of 10½ in. and the pulley arrangement on the crane jib gives a velocity ratio of 3 from the winding drum to the lifting hook.

The mechanical efficiency of the engine is 90 per cent. and of the transmission 85 per cent.

Determine the mean effective pressure required in the cylinders in order to raise a load of 4½ tons at a speed of 44 ft. per min.

7. (a) Draw a sectional diagram of a surface condenser for a steam turbine showing the directions of the steam flow and of the water circulation. Mention any auxiliary machinery required in conjunction with a condenser.

(b) Explain how the thermal efficiency of an engine or a turbine is increased by the addition of a condenser.

(c) Steam enters a surface condenser at a pressure of 1½ lb. per sq. in., and the condensate leaves at 105°F. The circulating water enters at 60°F and leaves at 87°F. If 35 lb. of circulating water are used per pound of steam condensed, determine the dryness fraction of the steam entering the condenser.

\[
\begin{array}{cccc}
\text{p (lb. per sq. in.)} & \text{t°F} & \text{h (B.t.u.)} & \text{L (B.t.u.)} \\
1\frac{1}{2} & 115 & 84 & 1,025
\end{array}
\]
8. (a) State the advantages and disadvantages of a diesel engine as compared with a petrol engine for a motor-bus or motor lorry.

(b) Make a sketch of a typical indicator diagram taken from a four-stroke cycle diesel engine. Explain the diagram.

(c) The brake horse-power of a petrol engine is found by testing with a rope-brake. The following readings were taken:

- Brake wheel diameter = 2 ft. 4 in.
- Load on rope = 60 lb.
- Spring balance reading = 8 lb.
- Speed of engine = 1,800 r.p.m.

Calculate:

(i) the B.H.P. of the engine;

(ii) the brake thermal efficiency if the fuel consumption is 1 \( \frac{1}{4} \) gallons of petrol per hour.

Calorific value of petrol = 20,000 B.t.u. per lb.

One gallon of petrol weighs 7.6 lb.
1963

SCOTTISH CERTIFICATE OF EDUCATION

NAVIGATION

Ordinary Grade

Monday, 6th May—1.30 p.m. to 4.0 p.m.

FIVE questions in all should be attempted: BOTH questions in Section A and any THREE questions from Section B.

Answers should, wherever possible, be illustrated by clear diagrams of reasonable size.

The value attached to each question, or to each part of a question, is shown in the margin.

Write legibly and neatly, and leave a space of about half an inch between the lines. Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

A Deviation Table is provided for your use on page five of this question paper. Nautical Tables may also be consulted subject to certain restrictions which will be intimated to you by the invigilator.

On the top left-hand corner of the chart supplied enter:—(i) your own name; (ii) name of school (or centre).
SECTION A

BOTH questions should be attempted.

1. Chart 5103 (use variation 9° W. throughout, and take deviation from the Table printed on page five).

0000 A vessel is proceeding from Cardiff to Le Havre and at midnight she is in a position with Hartland Point Light bearing East True, distance 10 miles. The course is 240° by compass and the log reads 60.

0400 The log reads 110. The course is unchanged at 240° C.
Godrevy Island Light bears 130° C.
Longships Light bears 205° C.
(a) What is the ship’s true bearing and distance from Godrevy Island Light at 0400?
(b) What is the set and rate of the current that has been experienced since midnight?

0800 Lizard Head Light bears 050° T. The course is now 100° T. and the ship is steaming at 12 knots. A current is known to be setting 070° T. at 3 knots.

0930 Course and speed unchanged.
Lizard Head Light bears 350° T.
(c) What is the ship’s distance from Lizard Head Light at 0930?

1200 The ship’s position is fixed by Decca and she is found to be in Lat. 49° 40' N., Long. 04° 20' W. A course is shaped from this position to pass 12 miles to the northwards of Casquets Light. The speed is increased to 14 knots, and it is estimated that the tidal stream will set 050° T. at 3 knots until the ship has passed Casquets Light.
(d) What is the compass course to steer?
(e) What will be the true bearing of Casquets Light when it is abeam?

2. (a) Explain the meaning of the terms latitude of a place, and azimuth of a heavenly body.
(b) On one of the days in the year when the Equation of Time is zero a sundial in longitude 33° 15’ W. reads 1400 hours. What is the G.M.T., and what is the Zone Time at a naval station in the above longitude?
(c) The meridian altitude of the sun (fully corrected) was 64° 10’ on a day when its declination was 22° 05’ S. The sun bore 000° T. Find the latitude of the observer, illustrating your answer by a labelled figure.
(d) Draw a figure of the celestial sphere, either on the plane of the celestial horizon or on the plane of the observer’s meridian, for an observer in latitude 40° N. Label the zenith, the north celestial pole, the equinoctial, the observer’s celestial meridian, and the celestial horizon with the appropriate cardinal points.
Show on your figure, as accurately as you can, the position of a body which has L.H.A. 330° and declination 20° N.
What information can you derive directly from your figure about the PZX triangle?
SECTION B

Answer any THREE questions.

3. From a position in Lat. 64° N., Long. 05° E. a ship sails along the parallel of latitude until the longitude is 05° W., and then sails north until the latitude is 66° N. Find the total distance travelled. 

Marks (4)

1200 A ship is in a position with Bishop’s Rock (Lat. 49° 52’ N., Long. 06° 26’ W.) bearing 045° T., distance 10 miles. The ship is steering 290° C. and the speed is 12 knots.

1500 Course is altered to 220° C. Speed 12 knots.

1730 Course is altered to 180° C. Speed 12 knots.

It is estimated that throughout the current sets 080° T. at 2 knots.

Find by means of the Traverse Table the estimated latitude and longitude of the ship at 1900 hours. [Use variation 11° W. throughout, and take deviation from the Table printed on page five.]

Marks (13)

4. (a) At noon on a certain day it is estimated that a ship will be in latitude 49° 20’ S. The declination of the sun at noon on this day is 05° 28’ N. Ignoring all corrections, find the altitude the navigator would set on his sextant in readiness for the meridian altitude observation.

Marks (6)

(b) Explain clearly how a navigator determines whether an intercept is towards or away.

Marks (3)

(c) On board a ship at 0900 G.M.T. an observation of the sun is taken when in D.R. position Lat. 49° 15’ N., Long. 05° 35’ W. and the true altitude is found to be 35° 10’. The calculated zenith distance is 55° 02’ and the azimuth N. 130° E. The ship then steams on a course of 190° T. at a speed of 10 knots until 1300 G.M.T. when Ushant Light (Gp. Fl. (2) 10 secs.) is observed to bear 120° T. By plotting on the chart provided (5103), find the distance of the ship from Ushant Light at 1300 G.M.T.

Marks (8)

5. Define (i) a rhumb line, (ii) a great circle.

Show by sketches how a rhumb line course between two places in the southern hemisphere and a great circle course between the same two places would appear (i) on the surface of a globe, and (ii) on a Mercator’s chart.

Marks (8)

Calculate by Mercator sailing the true course from a position off Cape Leeuwin in Lat. 34° 22‘ S., Long. 115° 06’ E. to Dondra Head, Lat. 05° 56’ N., Long. 80° 36’ E. What distance would the ship have travelled when it reached the equator?

Marks (9)
6. (a) What are the causes of compass error? Indicate briefly why it changes when the ship's course is altered.

The sketch below shows the approximate positions of three prominent land marks, A, B, C, on a coastline running roughly East and West. By simultaneous compass bearings from a ship A bore 310° C., B bore 010° C., and C bore 050° C. How could you use the above information (i) to find the ship's position, and (ii) to check the compass error? What precaution would you observe in making a choice of objects for checking compass error in this way?

(b) Explain, with an illustrative diagram, what you understand by the term parallax in relation to the apparent altitude of a heavenly body. Why must account be taken of parallax when taking the altitude of the moon and of the sun but not of a star?

7. (a) What are neap and spring tides? How frequently do they occur? Indicate how such tides are connected with the phases of the moon. State two other factors which may affect the state of the tide.

(b) Indicate briefly how you would identify the Pole Star. Explain why this star is of special interest to navigators.

(c) (i) Show how the following are marked on a chart:—ebb stream, wreck buoy, rocks with limiting danger line, 30 fathom line.

(ii) What does an entry on a chart of Dr. 3 ft. indicate?
## DEVIATION TABLE

<table>
<thead>
<tr>
<th>Ship's Head in degrees</th>
<th>Deviation in degrees</th>
<th>Ship's Head in degrees</th>
<th>Deviation in degrees</th>
</tr>
</thead>
<tbody>
<tr>
<td>000 C.</td>
<td>5 E.</td>
<td>180 C.</td>
<td>5½ W.</td>
</tr>
<tr>
<td>010</td>
<td>5 E.</td>
<td>190</td>
<td>5½ W.</td>
</tr>
<tr>
<td>020</td>
<td>4½ E.</td>
<td>200</td>
<td>5 W.</td>
</tr>
<tr>
<td>030</td>
<td>4 E.</td>
<td>210</td>
<td>5 W.</td>
</tr>
<tr>
<td>040</td>
<td>3½ E.</td>
<td>220</td>
<td>4½ W.</td>
</tr>
<tr>
<td>050</td>
<td>2½ E.</td>
<td>230</td>
<td>4 W.</td>
</tr>
<tr>
<td>060</td>
<td>1½ E.</td>
<td>240</td>
<td>3 W.</td>
</tr>
<tr>
<td>070</td>
<td>1 W.</td>
<td>250</td>
<td>2½ W.</td>
</tr>
<tr>
<td>080</td>
<td>2½ W.</td>
<td>260</td>
<td>1½ W.</td>
</tr>
<tr>
<td>090</td>
<td>3½ W.</td>
<td>270</td>
<td>2 E.</td>
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<tr>
<td>100</td>
<td>4 W.</td>
<td>280</td>
<td>4½ E.</td>
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<tr>
<td>110</td>
<td>4½ W.</td>
<td>290</td>
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<td>120</td>
<td>5 W.</td>
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<td>5½ W.</td>
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<td>5½ W.</td>
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<td>7 E.</td>
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<td>330</td>
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<td>6 W.</td>
<td>340</td>
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<tr>
<td>180</td>
<td>5½ W.</td>
<td>360</td>
<td>5 E.</td>
</tr>
</tbody>
</table>
TECHNICAL SUBJECTS

Applied Mechanics

Ordinary Grade

Friday, 17th May—1.30 p.m. to 3.30 p.m.

Not more than FIVE questions should be attempted.

When candidates use a formula they must explain each symbol. Units must always be stated.

Take \( \pi = \frac{2 \pi}{r} \).

Square-ruled paper and four-place logarithmic tables are provided.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each part of each question is shown in brackets.

1. The efficiency of a certain lifting machine is 40 per cent, when raising a load of 1,200 lb. The ideal effort for this load on the machine is 20 lb.

Calculate:

(a) the velocity ratio of the machine; \((5)\)

(b) the actual effort required to raise a load of 1,200 lb.; \((7)\)

(c) the law of the machine if an effort of 30 lb. is required to raise a load of 600 lb. \((8)\)
2. Figure 1 shows the outline of an articulated loader. The centre of gravity of the motor unit, which weighs 2 tons, is 2 feet behind the front axle. The trailer portion weighs 1 ton and the centre of gravity is 6 feet in front of the rear axle. The two loads are respectively 2 tons and 3 tons.

Determine:—

(a) the force exerted at the pivot P;  
(b) the reaction force at each of the three axles A, B and C.

![FIG. 1.](image)

3. An internal combustion engine may be working either on a four-stroke or on a two-stroke cycle.

Explain, with the aid of sketches, what is meant by these terms.

A four-cylinder petrol engine working on a four-stroke cycle has a cylinder bore of 3\(\frac{1}{2}\) in. and a stroke of 4 in. and runs at a speed of 2,200 revs. per minute. The mean effective pressure is 90 lb. per sq. in.

Find the I.H.P. of the engine.
4. Sketch a typical load-extension graph for a mild steel specimen in a test to fracture. Mark on this graph the salient points. Give a detailed interpretation of this graph.

A hollow cast-iron column, 3 feet in length and with an external diameter of 5 in., carries a load of 22 tons. If the intensity of stress is not to exceed 4 tons per sq. in. find:—

(a) a suitable internal diameter of the column;

(b) the compression of the column if E for the material is 8,000 tons per sq. in.

5. A weight of 50 lb. is supported by an arrangement of steel wires as shown in figure 2.

Find the force acting on each of the wires 1, 2, 3 and 4

(a) by calculation; and

(b) by graphical methods.
6. Figure 3 shows a garden roller weighing 200 lb.

Find by calculation:—

(a) the initial force $P_1$ required to raise the roller;  

(b) the initial force $P_2$ required if the roller draw-bar was at an angle of $30^\circ$.  

---

**FIG. 3.**
7. A hoist for lifting concrete is shown in figure 4. The weight of the bucket is 1 cwt. and its contents 3 cwt. The coefficient of friction between the bucket and the guide is 0.25.

Determine the force P required:

(a) to raise the full bucket; (8)
(b) to lower the empty bucket. (8)

What is the reaction force at the pulley pin at A for (a) above? (4)
SCOTTISH CERTIFICATE OF EDUCATION

TECHNICAL SUBJECTS

Applied Mechanics

Higher Grade

Friday, 3rd May—2.0 p.m. to 4.0 p.m.

Not more than FIVE questions should be attempted.

When candidates use a formula they must explain each symbol. Units must always be stated.

Take \( t = \frac{2\sqrt{2}}{g} \), and \( g = 32 \) ft. per sec. per sec.

Square-ruled paper and four-place logarithmic tables are provided.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each part of each question is shown in brackets.
1. Figure 1 shows an indicator arm built up of three steel plates welded together, each plate weighing 0.1 lb. per sq. in. The arm is pivoted about the axis A and a balance weight of 10 lb., at the end of a cord attached to the pin B between the two end plates, keeps it in position against the stop C. Determine the force exerted by the arm on the stop:—

(a) if the cord from B is horizontal; and (14)

(b) if it is at an angle of 45°. (6)

FIG. 1
2. The pin-jointed bracket outlined in Figure 2 is fixed to a vertical wall at points X and Y, and has forces acting on it as shown.

(a) Draw a force diagram for the frame, scale 1 in. = 1 ton, and from it determine the magnitude and nature of the reaction forces at X and Y, and the magnitude and nature of the forces in each of the three members attached to the joint X.

(b) If the middle member attached to X has a cross-sectional area of 0.75 sq. in., and a length exactly 5 ft. long marked off on it when unloaded, determine the amount and the nature of the change in this length when under load if Young’s Modulus for the material is 13,000 tons per sq. in.
3. (a) Figure 3 shows packing cases, each weighing 500 lb., sliding down a chute AB, connecting two floors of a factory. The coefficient of friction is 0.3. If the cases pass the point A at 1 ft. per sec., determine:

(i) the velocity at which the cases pass point B;  
(ii) the time taken for each case to descend from A to B.

(b) A shaft of 3 1/2 in. diameter, running at a speed of 240 rev. per min., is supported by a bearing on which it exerts a force of 300 lb. If the coefficient of friction between shaft and bearing is 0.04, determine the horse power absorbed by friction.

![Diagram of chute AB with cases sliding down.](image-url)
4. The screw of a screw-jack has a square thread of $\frac{3}{8}$ in. pitch. The load is raised and lowered by means of a combined screwed collar and worm-wheel, which engages with the screw and is turned by a single-threaded worm as shown in Figure 4. The worm-wheel has 15 teeth and the worm spindle is turned by a handle of $5\frac{1}{4}$ in. effective length. The law of the machine is found to be 

$$P = 0.0025W + 2.5,$$

where $W$ = load lifted and $P$ = effort required. Calculate:

(a) the velocity ratio of the jack;  
(b) the effort required to raise a load of 3,000 lb.;  
(c) the efficiency at this loading;  
(d) the work done by the effort in raising this load a distance of 1 inch;  
(e) the effort required to lower this load a distance of 1 inch if the work done against friction is the same in both directions.

FIG. 4.
5. A wagon of 14 tons weight, having a tractive resistance of 12 lb. per ton, is to be lowered down an incline of 1 in 28 by means of a wire rope passed round a drum at the top. The effect of the weight of the rope may be neglected.

(a) Determine the pulling force required on the rope during each of the following periods:

(i) when the wagon is held stationary on the incline before starting; (5)

(ii) when it is being accelerated at 0.5 ft. per sec. per sec. to its controlled uniform speed which it reaches after travelling 49 feet; (5)

(iii) when running at this uniform speed for a distance of 140 yards; (1)

(iv) when nearing the foot of the incline at which the wagon has to be stopped, with uniform retardation, in a distance of 35 feet. (5)

(b) Determine the time required for the journey. (4)


(a) A motor-car weighing 15 cwt. is travelling at 45 miles per hour on a level road.

Determine:

(i) its kinetic energy; (4)

(ii) the distance it will run before stopping if the average braking force applied is 1,400 lb.; (2)

(iii) the amount of heat (B.t.u.) generated during braking. (2)

(b) A horizontal helical spring, fixed at one end, has a stiffness of 40½ lb. per in. If a body of 48 lb. weight strikes the spring horizontally at a speed of 6 feet per sec., calculate the maximum amount by which the spring is compressed by the impact. (10)

7. Make a neat sketch of a typical indicator diagram for a diesel engine working on the four-stroke cycle.

A single-cylinder engine of this type runs at 450 rcp. per min. The generator which it has to drive has an efficiency of 92.5 per cent., and has a full-load output of 60 amperes at 230 volts. If the mechanical efficiency of the engine is 80 per cent., and the mean effective pressure taken over the whole cycle is 88 lb. per sq. in., determine the bore of the cylinder required if the stroke-to-bore ratio is to be 1.25. (16)
TECHNICAL SUBJECTS

Technical Drawing

Ordinary Grade

Friday, 17th May—9.30 a.m. to 12 noon

Candidates should attempt question 1, and any other THREE questions.

The figures are on a separate paper.

Use both sides of the paper and number each question distinctly.

Construction lines must be shown and should be clearly distinguished from outlines.

Dimensions need not be shown.

The value attached to each question is shown in brackets.

1. Figure 1 shows two elevations of a casting.

Draw full size:—

(a) the given elevation;  
(b) a sectional end elevation on the line AA produced to the right of (a);  
(c) a plan produced from (a).

Show all hidden lines. Any small undimensioned curves should be inserted free-hand.

Marks

2. Figure 2 shows an elevation and plan of a shaped block.

Draw full size:—

(a) the two given views;  
(b) an auxiliary elevation in the direction of arrow A.

Marks
3. Sketch free-hand, approximately full size, an isometric view of the shaped block in Figure 2, in which surfaces P and Q are both visible. Show a $\frac{1}{2}$ in. diameter bolt with a hexagonal head passing through a hole in the block at 00. (16)

4. Figure 3 shows a plan view of a right square pyramid and a development of the sides after part of the pyramid has been cut away. For the part remaining, draw full size:
   
   (a) the given development; (2)
   (b) the plan and elevation; (4, 6)
   (c) the true shape of the section. (4)

5. In order to mark off a flower-bed in a lawn a gardener inserts two stakes, A and B, 5 ft. apart. To each stake is tied one end of a piece of twine 8 ft. long. He inserts a knife K inside the loop of twine and keeping the twine taut (i.e., AK + KB is always 8 ft.) marks out the bed.

   To a scale of 1 in. = 1 ft. construct, using drawing instruments, the shape of the bed. What is this shape called? (16)

6. Figure 4 shows the elevation of a cylinder cut by an inclined plane. Draw full size:
   
   (a) the given elevation; (2)
   (b) a development of the curved surface of the cylinder; (6)
   (c) an auxiliary plan in the direction of arrow A. (8)
1963

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To be distributed with the

TECHNICAL DRAWING

Ordinary Grade

QUESTION PAPER

FIGURES

[ 111 (a) ]
FIG. 1.

ELEVATION.

END ELEVATION.

Page two

Page three
Question 1 should be attempted and EITHER Question 2 OR Question 3.

The figures are on a separate paper.

Both sides of the drawing paper should be used.

The value attached to each part of each question is shown in brackets.

1. Figure 1 shows the component parts of a pump. The front cover plate has been removed.

Draw, full size, the following views of the assembly:

(a) a half-sectional elevation, indicated by A–B, when the cylinder is in the extreme left-hand position in the slot of the casing, i.e., when the centre line of the cylinder lies along O–Y;  

(b) a sectional plan below (a), indicated by C–D, with the circular valve and cylinder removed;  

(c) insert six of the principal dimensions.

All hidden lines should be shown.
EITHER

2. Figure 2 shows the elevation of a sheet metal cowl (or coverplate) formed from the surface of half the frustum of a cone and attached to a circular duct.

Draw, to a scale of 1 inch representing 1 foot, the following views:—

(a) the given elevation; (3)

(b) an end elevation, including a short portion of the duct, viewed in the direction of the arrow X; (13)

(c) a plan. (19)

Hidden and construction lines should remain on the drawing.

OR

3. A solid is made up from the frustum of a cone, a regular octagonal shaped facing and a triangular prism. A recess is formed in the solid with a semi-circular shaped soffit.

Figure 3 shows the incomplete elevation and the plan of this solid.

Draw, full size, the following views:—

(a) a complete elevation showing the curve of interpenetration A–B; (7)

(b) an end elevation in the direction of the arrow X; (17)

(c) a sectional plan on S–N. (11)

Hidden and construction lines should remain on the drawing.
1. Figure 1 shows the plan of a pitched roof over a building at the corner of a quadrangle. The pitch of the main roof is at 45° and the ridges BFE are on the same level.

Draw to a scale of \( \frac{1}{8} \) full size:
(a) the given plan;
(b) the front elevation;
(c) the end elevation;
(d) the true shapes of the holes in the roof through which the chimney passes;
(e) the true length of AB;
(f) the true length of DE;
(g) the true shape of ABFG.

Note.—Make the chimney any convenient height.

2. Figure 2 shows the outline of an octagonal-shaped chimney pot with a conical sheet metal hood placed above. The thickness of the chimney pot and the supporting brackets are omitted.

Draw to a scale of \( \frac{1}{10} \) full size:
(a) the given elevation;
(b) the plan;
(c) the auxiliary plan in the direction of the arrow A.
SECTION B

3. Figure 3 shows a vertical section through an opening in a cavity wall in which a casement window is to be fitted. The window is indicated as a single line section.

Using a construction with which you are familiar draw full size:

(a) the details at the lintel A when the sash is top hung;  (15)
(b) the details at B where the top sash meets the fixed lower sash; (10)
(c) the details at C where the fixed sash meets the wooden sill. (15)

4. A garage is to be erected on a sloping site as indicated in Figure 4. The walls are of 4½ in. brickwork with appropriate butts and the floor is concreted in situ.

(a) Describe with sketches the preparations necessary before commencing the brickwork building operations. (15)

(b) Draw to a scale of 1½ in. representing 1 foot the detail through the section line AA, showing foundation, concrete floor, wall to window sill height, and all the necessary provisions to exclude dampness. (25)

SECTION C

5. (a) Draw an outline of a pitched roof for a span of 18 feet, showing the structural members and naming the parts. (3)

(b) Show two methods by which the rafters may be prevented from spreading. (5)

(c) Name and describe the chief characteristics of a timber suitable for this roof. (4)

(d) What precautions should be taken to preserve the timber? (3)

6. (a) What are the advantages in using Plaster Boards for ceilings? (4)

(b) Indicate the carpentry preparations required when plaster boards are used on walls or ceilings. (4)

(c) What type of nails are used and why? (3)

(d) If a building is constructed of cavity walling and the specification indicates that plastering on the solid is required, how is this work carried out? (4)

7. (a) Name three materials used for coverings for pitched roofs. Describe the advantages and disadvantages of each. (9)

(b) Draw a sketch to show how one of the materials may be fixed to a roof. (4)

(c) In what circumstances would you select mastic asphalte as a roof covering? (2)
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To be distributed with the

BUILDING DRAWING

Ordinary Grade

Question Paper

FIGURES

[ 113 (a) ]
FIG. 1.
FIG. 2.

1'-8" DIA.

1'-0" ACROSS FLATS.

1'-4" ACROSS FLATS.

30°
WOODWORK

TECHNICAL SUBJECTS

Woodwork

Ordinary Grade—(First Paper)

TOOLS, MATERIALS AND PROCESSES

Thursday, 23rd May—1.30 p.m. to 2.45 p.m.

Candidates should attempt question 1 and any other THREE questions.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

The value attached to each question is shown in brackets.

Sketches may be used to illustrate your answers.

1. Make a sketch of a bookcase (open front) to contain the following books:
   - 18 books—each book 9 in. high, 6 in. wide and 1\frac{1}{2} in. thick;
   - 20 books—each book 7\frac{1}{2} in. high, 5\frac{1}{2} in. wide and 1\frac{1}{4} in. thick.

   The bookcase is to be made of hardwood and is to sit on a stand comprising rails and legs.

   Make a cutting list of the material required.

   Name the joints you would use in the construction of the bookcase.

   Sketch the joints used in the making of the stand.

   Marks

2. Name three hardwoods used in the making of quality furniture.

   Sketch the cross section of a tree trunk. Name four principal parts. Give a brief note of the function of each part.

3. It is required to join, edge to edge, two pieces of timber 2 feet long, 6 in. broad and \frac{8}{8} in. thick.

   Suggest three methods of doing this and describe one with pictorial sketches.

   Marks
4. Why is it desirable to "fill" a mahogany table top before polishing?
   Describe how you would (a) "prepare" and
   (b) "fill" this table top.

5. Explain fully, with the aid of sketches, the essential differences between a rip saw and a crosscut saw.
   What do you understand by the "set of a saw" and a "saw kerf"?
   Sketch the saw you would use to make a 5 in. radius curve on the shelf shown in figure 1. Name the saw and its parts.
6. A pillar of a small table lamp is to be turned between centres on a wood-turning lathe from a block 10 in. long by 2 in. square.

List the steps you would take:—

(a) in preparing the wood for the lathe;
(b) before switching on the machine;
(c) in completing the article to the given shape shown in figure 2.
7. Sketch **two** of the following joints and show where they would be used in the rectangular frame shown in figure 3.

(a) Haunched Mortise and Tenon Joint;
(b) Through Mortise and Tenon Joint;
(c) Stopped Mortise and Tenon Joint;
(d) Bridle Joint;
(e) Lap Dovetail Joint.

![FIG. 3](image-url)
TECHNICAL SUBJECTS

Woodwork

Ordinary Grade—(Second Paper)

Friday, 3rd May—1.0 p.m. to 4.0 p.m.

Read through the paper, studying carefully the details of the test.

If any dimension has been omitted use your own judgement.

Do not use files or glasspaper.

Additional wood is not allowed. If a mistake is made, work as closely as possible to the original sizes. Remember that clean cut and well set out work, even if incomplete, may earn more marks than inaccurate and badly finished work presumed to be complete.

No power-operated machines should be used in this test.

Print your NAME and SCHOOL or CENTRE on each piece of wood.

100 marks are assigned to this test.

Candidates should make

THE CORNER OF AN UNDER FRAME

the details of which are shown in sketch.

Materials

Any suitable hardwood.

1 piece 10 in. by 1½ in. by 1⅛ in.

1 piece 20 in. by 2 in. by 1⅛ in.
Read through the paper, studying carefully the details of the test.
If any dimension has been omitted, use your own judgement.
Do not use files or glasspaper.
Additional wood is not allowed. If a mistake is made, work as closely as possible to the original sizes. Remember that clean cut and well set out work, even if incomplete, may earn more marks than inaccurate and badly finished work presumed to be complete.
No power-operated machines should be used in this test.
Print your NAME and SCHOOL or CENTRE on each piece of wood.
100 marks are assigned to this test.

Candidates should make

THE HAT RACK
the details of which are shown in sketch.

Materials

Any suitable hardwood.
1 piece 16 in. by 4 in. by $\frac{3}{4}$ in.
1 piece 20 in. by $3\frac{1}{4}$ in. by $\frac{3}{4}$ in.
1 piece 14 in. by $1\frac{1}{2}$ in. by $\frac{3}{4}$ in.
1 piece of dowel rod 26 in. by $\frac{3}{8}$ in. diameter.
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WOODWORK HIGHER GRADE
Practical Test Paper

FIGURE

[ 116 (a) ]
TECHNICAL SUBJECTS

Metalwork

Ordinary Grade—(First Paper)

TOOLS, MATERIALS AND PROCESSES

Thursday, 23rd May—1.30 p.m. to 2.45 p.m.

Answer any FIVE questions.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

Sketches may be used to illustrate your answers.

20 marks are assigned to each question.

1. Describe briefly three characteristics of each of two non-ferrous metals commonly used in the workshop.
   In each case give two examples of work for which the metal is suitable.

2. (a) Explain briefly a function of a flux when soft soldering.
   (b) How would you re-tin a soldering iron? (Tabulate the steps.)
   (c) Why is over-heating of a soldering iron to be avoided?
   (d) How would you recognise when the iron is ready to use?

3. Explain four of the following terms:—
   Tailstock, compound slide, tool post, headstock, tumbler gears, chuck, combination drill, knurling tool.

4. Indicate two safety measures to be observed in each of the following:—
   (a) using a drilling machine;
   (b) grinding a lathe tool;
   (c) hammering heated metal on an anvil;
   (d) turning metal on a lathe.
5. Describe the method used and the tools required in spinning the small copper dish shown in figure 1.

![Fig. 1](image)

6. (a) Name three advantages of aluminium over the other non-ferrous metals used in the workshop.

(b) Two pieces of aluminium are to be jointed. How would you make this joint?

(c) Describe the procedure in annealing aluminium.

7. List the operations required to turn the paper weight shown in figure 2. The paper weight is turned from a 1 in. diameter brass bar.

![Fig. 2](image)

8. Sketch freehand three testing tools normally found in the metal workshop. Name these tools and state the purposes of each.

Page two
TECHNICAL SUBJECTS

Metalwork

Ordinary Grade—(Second Paper)

Friday, 3rd May—9.30 a.m. to 12.30 p.m.

Read through the paper, studying carefully the details of the test.

If any dimension has been omitted, use your own judgement.

Do not use emery cloth.

Additional metal is not allowed. If a mistake is made, work as closely as possible to the original sizes. Remember that well set out work, even if incomplete, may earn more marks than inaccurate and badly finished work presumed to be complete.

Print your NAME and SCHOOL or CENTRE on a label and attach it to the linen bag in which you place your finished work. Any sketches or devices made and used to assist your work must be similarly marked and handed to the Invigilator.

100 marks are assigned to this test.

Candidates should make

THE CANDLE HOLDER

the details of which are shown in the sketch.

Materials

1 piece Brass strip 4 in. by 1\(\frac{1}{2}\) in. by \(\frac{3}{4}\) in. filed to correct size and flat.
1 piece Brass strip 3\(\frac{1}{2}\) in. by \(\frac{1}{2}\) in. by \(\frac{1}{4}\) in.
1 piece Brass, soft, hexagonal, 1\(\frac{3}{4}\) in. long by 1 in. across flats.
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METALWORK ORDINARY GRADE

Second Paper

FIGURE

[ 118 (a) ]
Read through the paper, studying carefully the details of the test.
If any dimension has been omitted, use your own judgement.
Do not use emery cloth.
Additional metal is not allowed. If a mistake is made, work as closely as possible to the original sizes. Remember that well set out work, even if incomplete, may earn more marks than inaccurate and badly finished work presumed to be complete.
Print your NAME and SCHOOL or CENTRE on a label and attach it to each piece of the finished work. Any sketches or devices made and used to assist your work must be similarly marked and handed to the Invigilator. 100 marks are assigned to this test.

Candidates should make either Article No. 1

THE SPROCKET DRAWER

or Article No. 2

THE WALL ASH TRAY

the details of which are shown in sketches.

Materials

Article No. 1
1 piece M.S. bright 4\(\frac{3}{8}\) in. by \(\frac{1}{2}\) in. by \(\frac{1}{6}\) in.
2 pieces M.S. bright 3\(\frac{1}{8}\) in. by 1\(\frac{1}{2}\) in. by \(\frac{1}{3}\) in. filed to width.
1 piece M.S. bright 4\(\frac{1}{2}\) in. by \(\frac{5}{8}\) in. dia.
1 piece M.S. bright 3 in. by \(\frac{1}{4}\) in. dia.

Article No. 2
1 piece tinplate XX 12 in. by 8 in.
1 piece aluminium 4\(\frac{3}{8}\) in. by 2 in. by \(\frac{1}{8}\) in. thick—flat and filed to width.
1963
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HIGHER GRADE METALWORK
Practical Test Paper

FIGURES

[ 119 (a) ]
SCOTTISH CERTIFICATE OF EDUCATION

HOME MANAGEMENT

Cookery with Subsidiary Housewifery

Ordinary Grade—(First Paper)

Friday, 3rd May—2.0 p.m. to 3.30 p.m.

Candidates should attempt THREE questions, viz., the TWO questions of Section A and ONE question from Section B.

The value attached to each question is shown in the margin.

SECTION A

Both questions in this section should be attempted

1. (a) Why is meat an important food?

   (b) What methods of cooking beef would you recommend for the following purposes:

       (1) speed;
       (2) saving of labour;
       (3) economy;
       (4) ease of digestion?

   (c) What cut of beef would you buy for each of these methods?

   (d) What vegetable would you serve with each of the suggested dishes?

   (18)

2. Make a list of six rules which should be followed by a girl of 16 years to ensure a high standard of physical fitness. Explain the reason for each rule.

   Name three foods which will help to give her a clear and healthy complexion and three other foods which are essential for her growth.

   (18)
3. (i) Show by tabulation the differences in laundering short curtains made of
   (a) terylene, (b) printed cotton.
   (ii) Which of these materials is more labour saving and why?
   (iii) Name four detergents, two liquid and two in powder form.
       For what different types of household cleaning would you recommend each
       of these?

4. Why are high standards of hygiene necessary in food handling? How may these
   standards be maintained
   (a) in the washing of dishes and cutlery?
   (b) in food shops?

5. (a) State four up-to-date methods of heating a house.
   (b) Which would you choose for heating a four-roomed bungalow?
       Give three reasons for your choice.
   (c) State two advantages and two disadvantages of two of the other methods
       you have mentioned in (a).
SCOTTISH CERTIFICATE OF EDUCATION

HOME MANAGEMENT

Cookery with Housewifery and Laundrywork

Higher Grade—(First Paper)

Friday, 3rd May—2.0 p.m. to 3.30 p.m.

Candidates should attempt THREE questions, the TWO questions in Section A and ONE question from Section B.

The value attached to each question is shown in the margin.

SECTION A

Both questions in this section should be attempted

1. State five factors which you consider important when planning meals for a family; give reasons for your answer.

What is the effect of cooking on three of the following:—
meat, eggs, milk, green vegetables?

Suggest two precautions which should be taken when preparing green vegetables, and another two when cooking them in order to minimise loss of vitamin C.

(18)

2. Why is the budgeting of the family income an essential part of successful home management?

A family of four, father, mother and two daughters, aged thirteen and seven, have a weekly income of £16 after deduction of income tax and national health insurance. How would you apportion this money to provide for the needs of the family?

Show the division of the food allowance among the main suppliers, e.g., butcher, grocer, etc.

(18)
3. What are the advantages of using a refrigerator in the home? Explain, in detail, the routine you would follow in order to obtain maximum efficiency from it. How would you store perishable foods in hot weather where there is no refrigerator? (14)

4. What are the advantages and disadvantages of the following:
   (1) an "all electric" house;
   (2) hire purchase as applied to household equipment;
   (3) convenience foods;
   (4) man-made fabrics? (14)

5. (a) What are the characteristics of a good frying medium? Name two fats and two oils suitable for deep fat frying. State three precautions which should be taken to avoid accidents when frying food.
   (b) Explain the meaning of four of the following terms used in cookery and give one example of the use of each:
DRESS AND DESIGN

Needlesubjects with Design and Subsidiary Laundrywork

Ordinary Grade—(First Paper)

Friday, 3rd May—9.30 a.m. to 11.30 a.m.

Candidates should attempt FOUR questions, viz., the TWO questions of Section A, ONE question from Section B and ONE from Section C.

The value attached to each question is shown in the margin.

SECTION A

Both questions in this Section should be attempted

1. Name the two sets of threads used in weaving and explain their different purposes in the process.

Describe or show by a small pencil diagram what is meant by the three ways of material.

What attention should be paid to these various ways in the cutting out of garments?

Marks

(15)
2. \(a\) Select \textbf{FIVE} of the following faults which can occur when using the sewing machine and state how you would remedy them:\textit{—} \(M\)arks

(1) Incorrect tension.
(2) Missed stitches.
(3) Loops forming underneath.
(4) Needle bending or breaking.
(5) Thread breaking.
(6) Material puckering.

\(b\) What size of needle should be used for the machine stitching of:\textit{—}

(\(a\)) printed cotton;
(\(b\)) tweed?

\(c\) In hand sewing what size and type of needle should be used for:\textit{—}

(\(a\)) tacking tweed;
(\(b\)) hemming printed cotton?

\(b\) What size of needle should be used for the machine stitching of:\textit{—}

(\(a\)) printed cotton;
(\(b\)) tweed?

\(c\) In hand sewing what size and type of needle should be used for:\textit{—}

(\(a\)) tacking tweed;
(\(b\)) hemming printed cotton?

(SECTION B)

Only \textbf{ONE} question should be attempted from this Section

3. Name two fabrics suitable for each of the garments in the list below.

(1) A light-weight dressing gown or housecoat.
(2) Pyjamas.
(3) A skirt.
(4) A blouse to be worn with (3).
(5) A sun frock.

What \textbf{5} points would you consider when buying a commercial paper pattern? Explain why these points are important.

4. Your tweed skirt is in need of attention and has several grease spots on it. Describe how you would renovate it, dealing with the stains, minor repairs and sponging and pressing. Name the cleaning agents you would use to carry out these processes effectively.

Page two
SECTION C

Only ONE question should be attempted from this Section

An extra piece of paper is supplied for your rough sketches. This must be handed in with your finished design.

In Question 5 you may EITHER use the sheet of drawing paper on which there is an “outline” of a figure OR, on the plain sheet of paper, you may make your own drawing.

5. Sketch a two-piece dress in a style suitable for knitted fabric. Colour the dress in green and introduce a contrast choosing shades becoming to a girl who has black hair and a sallow complexion. Indicate as fully as possible the details of the dress.

6. Design a central decoration in two colours on a plain white ground for the lid of a work-basket 10 inches square. The decoration should be appropriate to either embroidery or fabric printing.

Marks

(10)  (10)
DRESS AND DESIGN

Ordinary Grade—(Second Paper)

Practical Test—Needlesubjects

Friday, 17th May—9.30 a.m. to 12 noon

INSTRUCTIONS TO CANDIDATES

Print, in ink, your full name and that of the school or centre and town on the envelope provided for the purpose.

Read through the paper and study the details of the test.

Proceed with the test, using the material provided. No additional material will be supplied. If you should make a mistake in cutting out, you must do the best you can with the given material.

At the end of the examination, remove the needle from your test. Write your name and that of the school or centre and town on the label provided.

Use the safety pin provided to attach the label firmly to your finished test.

Put into the envelope:

(a) the test;
(b) all cuttings left over from the given length of material.

Seal the envelope.

TEST

COTTON SKIRT

From the pattern and material supplied, cut out and make up the skirt, following the instructions given on the pattern.
DRESS AND DESIGN

Needlesubjects with Design and Subsidiary Laundrywork

Higher Grade—(First Paper)

Friday, 17th May—1.30 p.m. to 3.0 p.m.

Candidates should attempt THREE questions, the TWO questions in Section A, and ONE question from Section B.

The value attached to each question is shown in the margin.

SECTION A

Both questions in this Section should be attempted

1. This question is presented on a separate sheet of paper.
   When completed, pin your answer inside your answer book.  
   Marks

2. (a) State five ways in which a girl of 17 years can express her personality in her dressing and yet keep within her clothing budget and the limits of good taste.

   (b) Plan a basic wardrobe which can be adapted to suitable dressing for the following occasions or activities likely to arise when the girl leaves school:—

      (a) Attending a youth club.
      (b) For office wear.
      (c) Attending church.
      (d) For an informal dance.
      (e) Attending a football match.

   (c) What preparation would you make on Friday night to ensure that you will be well groomed when you go dancing on Saturday?  

   (25)
3. “Home sewing does not necessarily save money.” Comment on this statement and suggest the circumstances in which home sewing is considered advantageous.

Make a list of the garments which a girl should buy and those which she might with advantage make at home.

State five important points which you would consider when buying ready made clothes.

(15)

4. In keeping your clothes in good condition the question arises of washing, sponging and pressing at home or sending out to a dry cleaner.

Which of these methods would you use for each of the following garments?

(1) Cotton gaberdine slacks.
(2) Fisherman knit jersey.
(3) Rayon beach dress.
(4) Flannel skating skirt.
(5) Shower proof tweed coat.

What cleaning agents would you use for

(a) the washing,
(b) the sponging,

of the articles you choose to do at home?

How would you remove the following stains?

(1) Paint on the slacks.
(2) Vaseline on the skating skirt.
(3) Lipstick on the jersey.

(15)
SECTION A—QUESTION 1

(To be attempted by all candidates)
given three specimens of material: follow the example given below in describing

<table>
<thead>
<tr>
<th>p, width, per yard</th>
<th>Fibre and source</th>
<th>Weave</th>
<th>Use</th>
<th>Distinguishing feature</th>
<th>Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>gingham inches</td>
<td>Cotton</td>
<td>Plain</td>
<td>Aprons</td>
<td>Gingham</td>
<td>Wash</td>
</tr>
<tr>
<td>6d.</td>
<td>Cotton plant</td>
<td></td>
<td>Blouses</td>
<td>Check</td>
<td>Starch</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skirts</td>
<td></td>
<td>Iron</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No special precautions</td>
</tr>
</tbody>
</table>
1 (b) State briefly the test you would apply to determine the nature of the fibre in materials 3
INSTRUCTIONS TO CANDIDATES

Only ONE question should be attempted.

The value attached to each question is shown in the margin.

An extra piece of paper is supplied for your rough sketches. This must be handed in with your finished design.

In Question 1 you may EITHER use the sheet of drawing paper on which there is an “outline” of a figure OR on the plain sheet of paper, you may make your own drawing.

1. Sketch an off duty outfit in jersey fabric which will give pleasure to an 18-year old girl who is a first year probationer nurse. She likes to indulge in colour and fashionable lines when she is out of uniform and makes a special feature of handbag, gloves and necklace. Indicate as fully as possible the details of the outfit. Colour the sketch and make a small diagram showing the back view. (35)

2. A transparent rectangular finger-plate for the pale green door of a sitting room is to have behind it a decorative panel of the same size. Make a full-size design in colour for the panel which is 11 inches by 3 inches. The decoration should be designed either for embroidery or fabric printing. (35)
PRINT, IN INK, YOUR FULL NAME AND THAT OF THE SCHOOL OR CENTRE AND TOWN ON THE ENVELOPE PROVIDED FOR THE PURPOSE.

READ THROUGH THE PAPER AND STUDY THE DETAILS OF THE TEST.

PROCEED WITH THE TEST, USING THE MATERIAL PROVIDED. NO ADDED MATERIAL WILL BE SUPPLIED. IF YOU SHOULD MAKE A MISTAKE IN CUTTING OUT, YOU MUST DO THE BEST YOU CAN WITH THE GIVEN MATERIAL.

AT THE END OF THE EXAMINATION, REMOVE THE NEEDLE FROM YOUR TEST. WRITE YOUR NAME AND THAT OF THE SCHOOL OR CENTRE AND TOWN ON THE LABEL PROVIDED.

USE THE SAFETY PIN PROVIDED TO ATTACH THE LABEL FIRMLY TO YOUR FINISHED TEST.

PUT INTO THE ENVELOPE:
(a) THE TEST;
(b) ALL CUTTINGS LEFT OVER FROM THE GIVEN LENGTH OF MATERIAL.

SEAL THE ENVELOPE.

TEST

TWO PIECE DRESS

FROM THE MATERIAL AND PATTERN SUPPLIED, CUT OUT AND MAKE UP THE DRESS, FOLLOWING THE DIRECTIONS PRINTED ON THE PATTERN.
NURSING SUBJECTS

Anatomy and Physiology

Higher Grade—(First Paper)

Friday, 3rd May—2.0 p.m. to 3.30 p.m.

Only THREE questions to be attempted.

The value attached to each question is shown in the margin.

1. Write notes on the metabolism of protein, carbohydrate and fat. What kinds of food should the overweight person avoid or take in reduced quantity to improve his physical condition? (11)

2. Where is blood formed in the body? Describe the composition and functions of the blood. (11)

3. Describe the structure and function of the mammary gland. What are the advantages for a baby in being breast fed instead of artificially fed? (11)

4. Describe the structure of bone. How do the long bones of the body grow in length during childhood and adolescence? (11)

5. Describe the mechanism of respiration. (11)

6. Write brief notes on the function of five of the following.
   
   (a) Lymphatic Glands.
   (b) The Pancreas.
   (c) Parathyroid Gland.
   (d) Ureter.
   (e) Salivary Gland.
   (f) Red blood Corpuscle. (11)
NURSING SUBJECTS

Hygiene and Nutrition

Higher Grade—(Second Paper)

Friday, 17th May—1.30 p.m. to 3.0 p.m.

Only THREE questions should be attempted. ONE should be chosen from Section A, ONE from Section B, and a THIRD from EITHER section.

The value attached to each question is shown in the margin.

SECTION A

1. What are the dangers to health of the smoke pollution of the atmosphere in towns? What steps can be taken by town councils and ordinary citizens to reduce this nuisance?

2. What is the composition of water? What is done to secure a pure water supply for our cities and towns?

3. Why is it important for health to have a good system of refuse disposal especially in towns? What do you think should be done to stop litter in the countryside?

SECTION B

4. What are the important points to be considered in the feeding of 16 year old schoolboys to ensure that they are adequately nourished? State the reasons for the special needs of this age group.

5. Give six rules for training children in good eating habits. Why should these be observed?

At what stages should the various aspects of the training be introduced?

6. Why are mineral substances important in the diet? Name three of the most essential; write a short note on each, giving their function and stating two foods in which each is found.
ECONOMIC ORGANISATION

Ordinary Grade

Monday, 13th May—1.30 p.m. to 3.30 p.m.

Only FIVE questions should be answered.

Write legibly and neatly and leave a space of about half an inch between the lines.

Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.

20 marks are assigned to each question.

1. What is a joint-stock limited liability company? Outline the development of this form of business organisation during the 19th century.

2. Why was there so much unemployment in the period between 1919 and 1939? What steps did the government take to reduce it?

3. Examine the attitude of the state to trade unions between 1871 and 1939.

4. Compare and contrast the relative importance and the location of the principal British industries in the early 19th and early 20th centuries.

5. What factors have affected the rate of growth and geographical distribution of population in the United Kingdom since 1850?

6. Describe the economic activities of any one Scottish town or county, explaining briefly their historical development.

7. What considerations will determine how a commercial bank disposes of its assets?

8. What is a tariff? Discuss the importance of tariffs to Great Britain today.

9. What is meant by the nationalisation of an industry? Describe briefly the organisation of any one.
1. You are to examine the following records and from them prepare a bank reconciliation statement:

(i) Cash book (bank columns only).

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 25</td>
<td>Balance b/f</td>
<td>£180 6 0</td>
</tr>
<tr>
<td>&quot; 26</td>
<td>A. White</td>
<td>£28 5 0</td>
</tr>
<tr>
<td>&quot; 29</td>
<td>B. Black</td>
<td>£60 4 4</td>
</tr>
<tr>
<td>&quot; 30</td>
<td>G. Gray</td>
<td>£21 0 0</td>
</tr>
<tr>
<td>May 1</td>
<td>Balance c/f</td>
<td>£193 7 7</td>
</tr>
</tbody>
</table>

(ii) Bank Pass Book or Statement

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 25</td>
<td>Balance b/f</td>
<td>£180 6 0</td>
</tr>
<tr>
<td>&quot; 27</td>
<td>A. White</td>
<td>£28 5 0</td>
</tr>
<tr>
<td>&quot; 30</td>
<td>B. Black</td>
<td>£60 4 4</td>
</tr>
<tr>
<td>&quot; 30</td>
<td>Interest</td>
<td>£11 3</td>
</tr>
<tr>
<td>May 1</td>
<td>Balance c/f</td>
<td>£198 2 10</td>
</tr>
</tbody>
</table>
2. (a) Give four examples of adjustments which may be required in preparing the final accounts at the end of the accounting period.

(b) At 31st December, 1962, the Rent and Rates figure in a firm’s trial balance appears as £320. Of this amount, one-quarter is in respect of the following year.

Show how the ledger account would appear after making this adjustment, and give the entries which would have been made in the Profit and Loss Account and Balance Sheet. (20)

3. From the following information write up P. McTurk’s three-column cash book, carrying forward the balances.

1963
Feb.  1. Debit balances b/f., £360 (bank), £1 2s. 6d. (till).
   2. Sent cheque to R. Glover for the amount outstanding and due to him, £148 6s. 8d., less 2½ per cent. discount.
   4. Sold for cash, 1 electric clock, £5 17s. 6d. (not banked).
   5. A. Simpson paid his account, £42 15s. 0d., less £1 9s. 3d. discount, the cheque being paid into bank.
   6. Bought on credit from R. Glover, 15 electric shavers at £7 18s. 6d. each.
   7. Paid by cheque rent due £45.
   8. Cash sales £18 2s. 4d. (retained in office).
   9. Returned to R. Glover, 1 defective electric shaver.
   10. Purchased at a sale, 100 second-hand watches at 15s. each: paid by cheque.
   12. Drew £20 from bank for private use.
   13. Paid R. Glover by cheque the amount outstanding and due to him, less £2 15s. 5d. discount.
   14. Banked all cash, except £5 retained in till. (24)
4. (i) From the following balances prepare the Trading and Profit and Loss Accounts of James MacFarlane for the year to 31st December, 1962:

<table>
<thead>
<tr>
<th>Account</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wages</td>
<td>1,200</td>
</tr>
<tr>
<td>Salaries</td>
<td>700</td>
</tr>
<tr>
<td>Closing Stock</td>
<td>550</td>
</tr>
<tr>
<td>Rates</td>
<td>15</td>
</tr>
<tr>
<td>Purchases (net)</td>
<td>7,290</td>
</tr>
<tr>
<td>Rent</td>
<td>25</td>
</tr>
<tr>
<td>Advertising</td>
<td>30</td>
</tr>
<tr>
<td>Sales (net)</td>
<td>10,000</td>
</tr>
<tr>
<td>Stock; 1st January, 1962</td>
<td>520</td>
</tr>
<tr>
<td>Repairs to delivery van</td>
<td>60</td>
</tr>
</tbody>
</table>

(ii) From an examination of these final accounts answer the following questions:

(a) What is the percentage of gross profit to sales?
(b) What is the cost of materials used?
(c) What is the approximate rate of stock turnover?
(d) How much of each £100 of net sales was absorbed by wages?

(All calculations should be expressed correct to one decimal place.)
5. The Balance Sheet which follows is that of Fraser Raeburn, who carries on a radio and television business:

*Balance Sheet as at 28th February, 1963*

<table>
<thead>
<tr>
<th></th>
<th>£</th>
<th>£</th>
<th></th>
<th>£</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td>2,000</td>
<td></td>
<td>Fixtures, fittings, and van</td>
<td>1,300</td>
<td></td>
</tr>
<tr>
<td>add net profit</td>
<td>1,445</td>
<td></td>
<td>less depreciation</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>less drawings</td>
<td>1,000</td>
<td></td>
<td></td>
<td>445</td>
<td></td>
</tr>
<tr>
<td></td>
<td>445</td>
<td></td>
<td></td>
<td>1,100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2,445</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loan (repayable in 1967)</td>
<td>500</td>
<td></td>
<td>Stock in trade</td>
<td>780</td>
<td></td>
</tr>
<tr>
<td>Creditors</td>
<td>452</td>
<td></td>
<td>Debtors</td>
<td>1,150</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>less provision</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cash at bank</td>
<td>497</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cash in hand</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3,397</td>
<td></td>
<td></td>
<td>3,397</td>
<td></td>
</tr>
</tbody>
</table>

Calculate:

(i) the value of current assets;
(ii) the working capital;
(iii) the return per cent. on the capital Raeburn had in the business at the beginning of the period;
(iv) the estimated annual wastage of fixed assets expressed as a percentage;
(v) the percentage of total liabilities to capital employed at the end of the period;
(vi) the percentage of loan capital to proprietor’s capital at the end of the period.

(All calculations should be expressed correct to one decimal place.)
INSTRUCTIONS TO THE TEACHER

1. The fifteen minutes immediately preceding the beginning of the tests should be used to make yourself thoroughly familiar with the passages to be read.

2. When so instructed by the invigilator, read to the candidates the "Instructions to Candidates" given below.

3. The short practice passage of approximately eighty words which is printed on page 3 is to be used for practice reading to the candidates. The passage may be read once only and is not to be transcribed.

4. Then read the passages to the candidates clearly and naturally. Punctuation will be indicated by appropriate pauses and the inflection of the voice, and will in no case be dictated.

5. Tests should be read in ascending order from the lower to the higher speed required.

6. An interval of two minutes is to be allowed between the readings of the passages.

7. Phrasing according to any particular system of shorthand is not permitted.

8. The reading of each passage should occupy exactly four minutes.

9. Figures should be read in full, e.g., £164,300 (one hundred and sixty-four thousand, three hundred pounds).

10. Tests, or parts of tests, must not, under any circumstances, be read more than once.

11. Errors made in reading will be noted by the invigilator and taken into account by the examiners. Corrections must not be made by the teacher after the passage has been read.
12. No test paper may be taken from the room by you or by any other person until the conclusion of the examination.

13. When the passages required have been read you will immediately withdraw from the examination room.

INSTRUCTIONS TO CANDIDATES

The procedure will be as follows:—

1. A short practice passage will be read. This should not be transcribed. The shorthand notes must be handed in at the end of the examination.

2. Tests will be read in ascending order from the lower to the higher speed required.

3. An interval of two minutes will be allowed between the readings of the passages.

4. The shorthand notes may be taken with either pen or pencil, but transcripts must be made direct on the typewriter using double spacing.

5. The whole transcript, including insertions and amendments, must be typed. No credit will be given for any part of the transcription which has been handwritten.

6. You may take down the passages dictated at more than one speed, but you may submit a transcription of only one passage.

7. Alterations should not be made to the original shorthand notes. Any changes which you wish to make should be indicated by a circle round the wrong outline or phrase and the correct one written above.

8. You may not ask for the repetition of any word or phrase.

9. Transcription during subsequent readings, as well as in the intervals between readings, is strictly forbidden.

10. You will be told by the invigilator when typewritten transcription may be commenced.

11. The shorthand notes of the passage transcribed should be attached to the typed transcript and should be handed to the invigilator, together with all other shorthand notes made by you.

Page two
SHORTHAND

Practice Passage for Dictation

The passage may be read once only at an appropriate speed. Candidates should not make a transcription of the passage, but must hand in their shorthand notes at the close of the examination.

The oblique lines, /, mark the divisions into sections of ten words each. The reader should not make a pause when they occur, unless the sense requires it.

On the financial side I am pleased to report that / our undertakings show a net surplus for the year. This / is an excellent result when you consider the fact that / we have paid a great deal more in taxation than / last year and that we have to face a ten / per cent. charge on fuel tax. The directors are satisfied / that we need decrease the dividend by only two per / cent.; this makes a final figure of 10 per cent.//
Dear Sir,

For a long time we have been of the opinion that, except when a motor car is very new, the owner does not really like to spend his Saturday or Sunday washing the car. The average motorist does not enjoy the task of washing his car and would rather leave the job to someone else if it could be done without too much expense or inconvenience.

It is in this belief that we plan to set up in most of the bigger towns and cities in the country a fully automatic car-washing system. The equipment, which costs over £25,000, produces a washed car, clean inside and out, every 15 seconds. Each car takes three to five minutes to go through the full cleaning process, and ten vehicles can be in the production line at any one time.

In a special waiting room the customer may drink a free cup of coffee as he watches his car go through the various stages of cleaning. These are described in full in the attached booklet which, as you will see, also gives full details of costs of operating the system and suggests that the charge per vehicle for the full service would be in the region of 12s. 6d.

We think that your premises would be suitable for this machine and we should be pleased to discuss the matter fully with you.

Yours faithfully,
Seventy words per minute.

(Thirty-five minutes allowed for transcription.)

The oblique lines, /, mark the division of time, but the reader must not make a pause when they occur, unless the sense requires it. The double lines, //, mark the completion of each minute.

Dear Sir,

We were asked to look into the matter of chairs and desks for typists and, / in particular, to consider the most suitable heights for normal use. When we first looked into this we / found that, in general, typists were seated in positions which could not have been comfortable. Desks were / usually 27 to 30 inches high and chairs were 22 inches or higher. The tops of // desks were from 4 inches thick and the typist sat so high that she was unable to / get her knees under the desk, much less her feet on the floor.

We would, therefore, suggest that / in future the height of chair for your typists should be 18 inches; this would allow most / tall girls to sit with their feet squarely on the floor. Desks should be 24 inches from // the ground and the thickness of the surface should be no more than one inch which would / give a desk top 25 inches from the floor. This would be 3 inches lower than we / would suggest for desks suitable for clerks.

A further important point is that, if the typist is / to have room to sit with her knees under the desk top, the depth of the knee-hole // should be at least 12 inches directly beneath the desk top and 18 inches at floor level./

In the case of desks which may be required for use by operators of other office machines the / new 28-inch desk is likely to be the most suitable.

If you are interested in / seeing our new designs we shall be very pleased to arrange for a representative to call.

Yours faithfully, //
1963

SCOTTISH CERTIFICATE OF EDUCATION

ECONOMIC ORGANISATION

COMMERCE—HIGHER GRADE

Tuesday, 21st May—2 p.m. to 4 p.m.

Only FIVE questions should be answered.
Write legibly and neatly and leave a space of about half an inch between the lines.
Marks may be deducted for bad spelling and bad punctuation, and for writing that is difficult to read.
20 marks are assigned to each question.

1. Define (a) balance of trade; 
   (b) balance of payments.
   Why has Britain experienced difficulties with her balance of payments since 1945?

2. What is a market? Give examples of different kinds of markets, and describe one market fully.

3. Which British industries have declined in the 20th century, and why?

4. Which are the principal items of government expenditure and revenue? Discuss their relative importance today and indicate those items which have grown most rapidly since 1939.

5. What are the economies of large-scale production? How are these achieved in modern industry?

6. Trace the development of government industrial policy since 1931.

7. What items are taken into account in estimating the amount of the Gross National Product?

8. What are the causes of the relatively high unemployment in Scotland today?

9. What is meant by the phrase takeover bid? Why are such bids made?
Candidates should attempt SEVEN questions, viz., the three questions in Section A and any four questions taken from Section B.

Before attempting to answer any question, candidates should read the whole of it very carefully, since time is often lost through misapprehension as to what is really required.

Four-place mathematical tables are provided.

All the working must be shown in its proper position in the answer and, when necessary, the different steps of the calculation should be shortly indicated in words.

Algebraical symbols may be used if properly explained.

Graphical methods may be used where appropriate in the solution of the questions on statistics.

Marks will be deducted for careless or badly arranged work.

The value attached to each question is shown in brackets after the question.
1. A bill of exchange for DM. 49,384.50, drawn in Frankfurt on 4th January, 1963, at 60 days certain, was discounted in London on 14th January, 1963, at 7 per cent. per annum. How much did the holder receive?

(DM. 11.27½ = £1: no days of grace were allowed.)

2. A dealer purchased one lot of 220 articles at 8s 6d each and another lot of 460 similar articles at 8s 2d each. Forty of the articles, which were damaged in his warehouse, became worthless. At what price per article, correct to the nearest penny, should he mark the remainder so that he may have a profit of 25 per cent. on net selling price, after allowing 5 per cent. cash discount?

3. (a) What do you understand by a weighted average?

(b) The following are the average prices, in shillings per hundredweight, of certain crops in South Africa:

<table>
<thead>
<tr>
<th>Year</th>
<th>Maize</th>
<th>Sorghum</th>
<th>Wheat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1956</td>
<td>33</td>
<td>22</td>
<td>40</td>
</tr>
<tr>
<td>1957</td>
<td>29</td>
<td>17</td>
<td>39</td>
</tr>
<tr>
<td>1958</td>
<td>27</td>
<td>18</td>
<td>37</td>
</tr>
<tr>
<td>1959</td>
<td>28</td>
<td>19</td>
<td>36</td>
</tr>
<tr>
<td>1960</td>
<td>29</td>
<td>19</td>
<td>35</td>
</tr>
</tbody>
</table>

The average production for these years may be taken to have been in the ratio of twenty for maize, one for sorghum, and three for wheat. Using 1956 as a base year, construct a price index number (correct to one decimal place) for each of the years for the three cereals together.
SECTION B

Four questions should be attempted from this section.

4. (a) If the volume of one ton of anthracite is 39 cubic feet, how much anthracite, correct to the nearest hundredweight, can be contained in a cylindrical hopper which is 12 feet high and which has an internal diameter of six feet six inches? (5)

(b) What is the value of the contents at \( £9\ 15s.\ 0d \) per ton? 

\[ (\tau = 3.142) \]

5. The following table shows, for the various years, the population of the United Kingdom and the number of emigrants.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population (in thousands)</th>
<th>Emigrants (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1841</td>
<td>26,731</td>
<td>118</td>
</tr>
<tr>
<td>1851</td>
<td>27,391</td>
<td>336</td>
</tr>
<tr>
<td>1861</td>
<td>28,927</td>
<td>92</td>
</tr>
<tr>
<td>1871</td>
<td>31,485</td>
<td>193</td>
</tr>
<tr>
<td>1881</td>
<td>34,885</td>
<td>243</td>
</tr>
<tr>
<td>1891</td>
<td>37,733</td>
<td>219</td>
</tr>
<tr>
<td>1901</td>
<td>41,459</td>
<td>172</td>
</tr>
<tr>
<td>1911</td>
<td>45,222</td>
<td>455</td>
</tr>
</tbody>
</table>

Discuss, and comment on, the relationship between these two sets of figures. (15)

6. (a) An employee's salary was increased by \( £90 \) per annum but income tax at the rate of 7s 9d in the £ on seven-ninths of this was deducted before payment. What percentage of the gross increase (correct to the nearest whole number) did he actually receive? (5)

(b) If his former salary was £850 a year, on which he paid income tax of £110 per annum, what increase of gross salary, correct to the nearest £5, would have increased his net income by 15 per cent? (15)

7. A man purchased from an assurance company on his fifty-fifth birthday a life annuity of £500, payable annually, the first payment to be made on his sixtieth birthday. How much did he pay for the annuity, if compound interest was reckoned at 6 per cent. per annum and if the assurance company estimated that the annuity would run for fifteen years? (15)

8. (Turn over)
8. In a certain examination the marks scored by the 654 candidates in the subjects of history and physics were distributed as follows:

<table>
<thead>
<tr>
<th>Range</th>
<th>History</th>
<th>Physics</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-19</td>
<td>15</td>
<td>41</td>
</tr>
<tr>
<td>20-29</td>
<td>43</td>
<td>64</td>
</tr>
<tr>
<td>30-39</td>
<td>67</td>
<td>88</td>
</tr>
<tr>
<td>40-49</td>
<td>128</td>
<td>103</td>
</tr>
<tr>
<td>50-59</td>
<td>156</td>
<td>112</td>
</tr>
<tr>
<td>60-69</td>
<td>134</td>
<td>95</td>
</tr>
<tr>
<td>70-79</td>
<td>71</td>
<td>79</td>
</tr>
<tr>
<td>80-89</td>
<td>38</td>
<td>47</td>
</tr>
<tr>
<td>90-99</td>
<td>2</td>
<td>25</td>
</tr>
</tbody>
</table>

Make a comparison of the distribution of marks in the two subjects by calculating the modes, medians, and upper and lower quartiles. Comment on any significant differences between the two sets of figures. (15)

9. An investor, who held 4,200 shares of £1 each on which a dividend of 10 per cent. was declared, wished to increase his annual income by 10 per cent. He sold his shares at 35s. each and reinvested the proceeds, partly in a 7 per cent. stock at 105, and partly in 10s shares (on which a dividend of 7 1/2 per cent. was paid) at 12s 6d each. How much did he spend on each to obtain the increased income?

(Ignore brokerage and income tax.) (15)
ACCOUNTING

COMMERCE—HIGHER GRADE

Thursday, 9th May—9.30 a.m. to 11.30 a.m.

Marks will be deducted for careless or badly arranged work.

All necessary calculations should be clearly shown on the third page of the cover of the examination book.

Each question should begin on a fresh page and should be clearly numbered.

The value attached to each question is shown in brackets after the question.
1. (a) Distinguish between the changes in value of the assets of a business due to:

(i) wear and tear,
(ii) obsolescence,
(iii) effluxion of time, and
(iv) appreciation.

In each case give an example of a fixed asset which may vary in value in the way described.

(b) Animals form one of the principal assets in a travelling circus. How would you suggest providing for their annual depreciation? (14)

2. Study the following account taken from a card ledger system, and answer the questions which follow:

<table>
<thead>
<tr>
<th>Date</th>
<th>Details</th>
<th>Fol.</th>
<th>Dr.</th>
<th>Cr.</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>£  s. d.</td>
<td>£  s. d.</td>
<td>£  s. d.</td>
</tr>
<tr>
<td>1962</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 June</td>
<td>Balance</td>
<td>b/f</td>
<td>1,901 10 6</td>
<td></td>
<td>1,901 10 6</td>
</tr>
<tr>
<td>30 June</td>
<td>Sales</td>
<td></td>
<td>2,800 1 6</td>
<td></td>
<td>4,701 12 -</td>
</tr>
<tr>
<td>30 June</td>
<td>Returns</td>
<td></td>
<td></td>
<td>30 5 6</td>
<td>4,671 6 6</td>
</tr>
<tr>
<td>30 June</td>
<td>Discount</td>
<td></td>
<td></td>
<td>42 8 2</td>
<td>4,628 18 4</td>
</tr>
<tr>
<td>30 June</td>
<td>Bank</td>
<td></td>
<td></td>
<td>3,520 10</td>
<td>1,108 8 4</td>
</tr>
</tbody>
</table>

(a) What is the purpose of this account?
(b) State the source of each item in the account.
(c) In which ledger would you expect to find this account?
(d) What does the closing balance represent? (14)
The following statement refers to the Whitewings Gliding Club.

Receipts and Payments Account
for year ended 31st December, 1962

<table>
<thead>
<tr>
<th>Receipts</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash in hand at 1.1.62</td>
<td>12</td>
</tr>
<tr>
<td>Balance at bank 1.1.62</td>
<td>154</td>
</tr>
<tr>
<td>Annual subscriptions</td>
<td>846</td>
</tr>
<tr>
<td>Entrance fees</td>
<td>94</td>
</tr>
<tr>
<td>Sale of tickets for gliding display</td>
<td>180</td>
</tr>
<tr>
<td>Let of hall</td>
<td>250</td>
</tr>
<tr>
<td>Receipts from catering</td>
<td>285</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Payments</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printing, stationery and stamps</td>
<td>145</td>
</tr>
<tr>
<td>Wages of mechanic</td>
<td>443</td>
</tr>
<tr>
<td>Rent and rates of hangar and hall</td>
<td>240</td>
</tr>
<tr>
<td>Heating, lighting and cleaning</td>
<td>160</td>
</tr>
<tr>
<td>Cost of display</td>
<td>102</td>
</tr>
<tr>
<td>Purchases for catering</td>
<td>236</td>
</tr>
<tr>
<td>Honorarium to Secretary</td>
<td>50</td>
</tr>
<tr>
<td>Purchase of Glider</td>
<td>200</td>
</tr>
<tr>
<td>Cash in hand at 31.12.62</td>
<td>10</td>
</tr>
<tr>
<td>Balance at bank 31.12.62</td>
<td>235</td>
</tr>
</tbody>
</table>

£1,821                                           £1,821

On 31st December, 1961, the Club owned gliding equipment valued at £375, and at that date subscriptions unpaid amounted to £27, while those paid in advance amounted to £18. Also, at that date rates amounting to £16 had been paid in advance, and £30 was owing for catering purchases.

On 31st December, 1962, subscriptions in arrears were £33 and those received in advance amounted to £12, while £98 was owing for catering purchases. At that date there was a stock of stationery and stamps valued at £21. The amount paid during the year for rates was £40 and of these £15 were prepaid at 31st December, 1962.

You are asked to present the club accounts to show the result of running the club for the year and to provide a balance sheet at 31st December, 1962. (23)
4. On 1st January, 1960, Bone, Legge and Foot started practising as doctors in partnership under an agreement which provided that:

(i) Interest should be allowed on capital accounts at the rate of 5 per cent. per annum, but interest on current accounts and on drawings should be ignored.

(ii) Foot should receive a salary of £500 per annum.

(iii) The balance of profit or loss should be divided between the partners (in the order named above) in the proportions 6:3:1.

(iv) Bone personally guaranteed that Foot's share in any year, exclusive of interest and salary, should not be less than £200, but any amount credited to Foot under this guarantee could be recovered by Bone from Foot's share of profit, if any, in excess of £200 in the next following year.

During the first three years of the partnership the capital accounts remained fixed at: Bone, £15,000; Legge, £4,000; Foot, £1,000.

The net results, before charging interest or partnership salary, were:

\[
\begin{align*}
\text{Year to 31st December, 1960, loss} & \quad \text{£600} \\
\text{Year to 31st December, 1961, profit} & \quad \text{£2,300} \\
\text{Year to 31st December, 1962, profit} & \quad \text{£5,800}
\end{align*}
\]

Draw up a statement in tabular form showing each partner's net share of the above profit or loss for each year.

5. The following final statements relate to two businesses. From these figures give as full an accounting description as possible of the two firms, using ratios and percentages, and comparing one with the other.

<table>
<thead>
<tr>
<th></th>
<th>Business A</th>
<th>Business B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>£48,000</td>
<td>£40,000</td>
</tr>
<tr>
<td>Less cost of Sales</td>
<td>£30,000</td>
<td>£17,000</td>
</tr>
<tr>
<td>Gross profit</td>
<td>£18,000</td>
<td>£23,000</td>
</tr>
<tr>
<td>Less operating expenses</td>
<td>£13,000</td>
<td>£13,000</td>
</tr>
<tr>
<td>Net profit</td>
<td>£5,000</td>
<td>£10,000</td>
</tr>
<tr>
<td>Capital represented by:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed assets</td>
<td>£15,000</td>
<td>£55,500</td>
</tr>
<tr>
<td>Stock</td>
<td>£9,000</td>
<td>£3,000</td>
</tr>
<tr>
<td>Debtors</td>
<td>£4,000</td>
<td>£4,000</td>
</tr>
<tr>
<td>Cash at bank</td>
<td>£2,000</td>
<td>£2,000</td>
</tr>
<tr>
<td></td>
<td>£30,000</td>
<td>£64,500</td>
</tr>
<tr>
<td>Less Creditors</td>
<td>£5,000</td>
<td>£4,500</td>
</tr>
</tbody>
</table>

\[(C41585)\]
Shorthand & Typewriting

1963

SCOTTISH CERTIFICATE OF EDUCATION

SHORTHAND

COMMERCE—Higher Grade (First Paper)

Tuesday, 21st May—9.15 a.m. to 10.45 a.m.

This paper must not be seen by any candidate.

INSTRUCTIONS TO THE TEACHER

1. The twenty minutes immediately preceding the beginning of the tests should be used to make yourself thoroughly familiar with the passages to be read.

2. When so instructed by the invigilator, read to the candidates the "Instructions to Candidates" given below.

3. The short practice passage of approximately eighty words which is printed on page 3 is to be used for practice reading to the candidates. The passage may be read once only and is not to be transcribed.

4. Then read the test passages to the candidates clearly and naturally. Punctuation will be indicated by appropriate pauses and the inflection of the voice, and will in no case be dictated.

5. Tests should be read in ascending order from the lower to the higher speed required.

6. An interval of two minutes is to be allowed between the reading of each of the passages.

7. Phrasing according to any particular system of shorthand is not permitted.

8. The reading of each passage should occupy exactly three minutes.

9. Figures should be read in full, e.g. £164,300 (one hundred and sixty-four thousand, three hundred pounds).

10. Tests, or parts of tests, must not, under any circumstances, be read more than once.

11. Errors made in reading will be noted by the invigilator and taken into account by the examiners. Corrections must not be made by the teacher after the passage has been read.
12. No test paper may be taken from the room by you or by any other person until the conclusion of the examination.

13. When all the passages required have been read you will immediately withdraw from the examination room.

**INSTRUCTIONS TO CANDIDATES**

The procedure will be as follows:

1. A short practice passage will be read. This must not be transcribed. The shorthand notes must be handed in at the end of the examination.

2. Tests will be read in ascending order from the lower to the higher speed required.

3. An interval of two minutes will be allowed between the reading of each of the passages.

4. The shorthand notes may be taken with either pen or pencil, but transcripts must be made direct on the typewriter using double spacing.

5. The whole transcript, including insertions and amendments, must be typed. No credit will be given for any part of the transcription which has been handwritten.

6. You may take down the passages dictated at more than one speed, but you may only submit a transcription of the two passages at the same speed, using a separate sheet of paper for each passage.

7. On no account may alterations be made to the original shorthand notes. Any alterations which you wish to make should be indicated by a circle round the wrong outline or phrase and the correct one written above.

8. You may not ask for the repetition of any word or phrase.

9. All typing during subsequent readings, as well as in the intervals between readings, is strictly forbidden.

10. You will be told by the invigilator when transcription may be commenced.

11. The shorthand notes of the passages transcribed should be attached to the transcript and should be handed to the invigilator, together with all other shorthand notes made by you.

*Page two*
SHORTHAND

Practice passage for dictation

The passage may be read once only at an appropriate speed. Candidates should not make a transcription of the passage, but must hand in their shorthand notes at the close of the examination.

The oblique lines, /, mark the divisions into sections of ten words each. The reader should not make a pause when they occur, unless the sense requires it.

As Convener of your transport committee I have to report / our concern about the increasing amount of heavy traffic in / our city streets. The effect of this is that unless / we take fairly drastic steps to deal with the matter / we shall find ourselves in a position in which these / large vehicles will force our own buses off the main / streets. So that this will not be allowed to happen / we should consider soon a new system of traffic control. /
Eighty words per minute

(One hour allowed for transcription)

The oblique lines, /, mark the division of time, but the reader must not make a pause when they occur, unless the sense requires it. The double lines, ///, mark the completion of each minute.

Passage A

The 46th annual general meeting of the Park Machine Company, Limited, was held today at the Old Waverley Hotel, Aberdeen, the chairman of the Company presiding. He said:

"Ladies and Gentlemen, In accordance with our usual custom I suggest / that with your permission the report and accounts be taken as read, but before making any comments on the accounts / I propose to deal with a change made in the board of this company since we last met.

In March //// of this year Mr. James Gray decided to give up his various industrial interests and to resign from the board./// It has been my privilege and pleasure to have been associated with him on the board of this company for / the past fifteen years during which period he has proved to be a wise director and loyal colleague. I am / sure that shareholders will desire to associate themselves with the board in wishing Mr. Gray many years of happy retirement./// To fill the vacancy Mr. Andrew Black was then asked to join the Board.

We are pleased to report a / trading profit for the past year ended March 30th last of £860,000, representing an increase / of £58,000 over the previous year. The net profit for the year was £300,000, / as against £250,000 for last year, an increase which you will agree is most satisfactory." ///
At the recent meeting of our local motoring club an interesting talk was given by the secretary on the subject: "When does it pay to change a car?" In the course of his address he said that he had noticed that during the year the second-hand value of cars of not more than one year old had fallen sharply in relation to the original price of the cars when they were new. It was interesting, however, to note that there had not been so marked a fall in the case of cars older than one year. The difference had, at least in part, upset the theory which had, since the war, come to be regarded as the usual method of replacing a car. When 10 per cent. or less of the original price of the car was lost after a year's motoring it was looked upon as a good bargain to replace a car every year. No major repair costs were likely to occur since the maker's guarantee covered most of the failures of mechanical parts of the car.

If, however, a new car was now to lose 25 to 35 per cent. of its value in the first year, but was likely to depreciate much more slowly after that, a private owner might well be wise to keep his new car longer or to buy a second-hand model that was a year old, or less.
Ninety words per minute

(Sixty-five minutes allowed for transcription)

The oblique lines, /, mark the division of time, but the reader must not make a pause when they occur, unless the sense requires it. The double lines, //, mark the completion of each minute.

Passage A

The annual general meeting of the company was held in London on April 29th. The following are the main features in the statement made by the chairman.

"The trading conditions during the year under review were by no means easy. I am, nevertheless, pleased to be able to report once again on a successful year's trading in the group. The trading profit of the group amounts to £8,500,000 and the net profit, before taxation, is £7,200,000, showing an increase of 12 per cent. on last year."

"The Directors recommend that a final dividend of 1s. 3d. per share be paid on the ordinary shares, making 1s. 10d. per share for the year. This is the same rate as that paid for the previous year, but it is payable on the ordinary capital as increased by the one for eight bonus issue in October, 1962. The balance sheet shows the continuing growth and expansion of the group, the total assets having now reached £69,500,000."

"Our efforts to expand have been directed towards the purchase of stores in the popular field. As good businesses become very much more difficult to acquire, the directors' present policy is to buy and to develop sites in towns in which we are not already represented. We are also, I may say, very anxious to purchase for the purpose of expansion any sites which are near, or if possible are next door to, those stores which have already become popular."
As you are aware three groups have already produced plans for a pay-as-you-view television service. It is, therefore, now up to this committee to consider which of the three companies should be given the contract.

In reaching a decision it is necessary for this committee to take into account the ability of each group to provide programmes for 365 days of the year, as well as to consider the kind of system they propose to use.

The basis of each system is the meter which turns on the programme when the customer has put in his coins, or sends him bills at intervals for those he has seen. The meters have not proved easy to design; the first to be used, and it is said still to be the best, was designed in America. It has been installed at an average cost of £20 per meter in the suburb of a city in Canada. The patents that protect this design are said to have made it difficult to produce a satisfactory alternative. The weakness of this meter is that it works with coins only and does not give credit.

The coin-box designed for the second group is not so neat as the first but it is expected to be less costly to produce. The total cost of putting in this form of television service will depend not only on the cost of the meter. It will also be more costly if the house is not already on a relay service.

The third group has not yet completed the design of its meter.
SCOTTISH EDUCATION DEPARTMENT: 1963

SCOTTISH CERTIFICATE OF EDUCATION

Showing the Subjects in which examinations on the Ordinary Grade will be held and the Subjects
of Subjects for which a Pamphlet containing Syllabuses and Specimen Question Papers on the
Ordinary Grade (and on the Higher Grade in Commercial Subjects and Homecraft) may be obtained from
Stationery Office.

List of Examination

<table>
<thead>
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<th>GRADE</th>
<th>SUBJECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinary</td>
<td>English, French, German, Spanish, Italian, Russian</td>
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<tr>
<td></td>
<td>Latin and Greek</td>
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<td></td>
<td>Modern Languages</td>
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<td></td>
<td>Modern Studies</td>
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<tr>
<td></td>
<td>Mathematics</td>
</tr>
<tr>
<td></td>
<td>Applied Mathematics</td>
</tr>
<tr>
<td></td>
<td>Physics, Chemistry, Botany, Zoology</td>
</tr>
<tr>
<td></td>
<td>Technical Drawing, Building Drawing, Metalwork</td>
</tr>
<tr>
<td></td>
<td>Woodwork</td>
</tr>
<tr>
<td></td>
<td>Agriculture and Horticulture</td>
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<td>Art</td>
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<td>Principles of Accounts</td>
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<td>Commercial Arithmetic and Statistics</td>
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<td>Shorthand and Typewriting</td>
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<td>Home-management</td>
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<td></td>
<td>Homecraft</td>
</tr>
</tbody>
</table>

Pamphlets

- English, 1s. 0d. (Is. 3d.)
- History 1s. 3d. (Is. 6d.)
- Geography (including Ordnance Survey Map), 3s. 6d. (3s. 10d.)
- Modern Studies (including Ordnance Survey Map), 3s. 6d. (3s. 10d.)
- Modern Languages, 1s. 3d. (Is. 6d.) (Specimens in French and German only)
- Latin and Greek, 1s. 0d. (Is. 3d.)
- Gaelic, 1s. 3d. (Is. 6d.)
- Arithmetic, Mathematics and Applied Mathematics, 1s. 3d. (Is. 6d.)
- Science, 1s. 3d. (Is. 6d.)
- Technical Subjects, 1s. 9d. (2s. 1d.)
- Agriculture and Horticulture, 1s. 3d. (Is. 6d.)
- Navigation, 6d. (9d.)
- Home-management, 2s. 0d. (2s. 4d.)

Particulars of other publications of the Department are contained in Sectional List No. 36
may be obtained from H.M. Stationery Office.
Biology
Ordyn—Question 1

1963
SCOTTISH CERTIFICATE OF EDUCATION

BIOLOGY

ORDINARY GRADE

Wednesday, 1st May—9.30 a.m. to 12 noon

QUESTION 1

(This question is optional to all candidates)

FILL THIS IN FIRST

Name of School (or Centre) ..................................................

Name of Candidate ..........................................................

To be pinned inside the candidate's book of answers and thus sent to the Department.

[ 101 (a) ]
Biology Ordinary—Question 1
Biology Ordinary—Question 1

1. The diagram on the opposite page shows some of the main organs of a small mammal.

   (a) Label the parts indicated by arrows.  
   Marks 4

   (b) Insert and label the heart (showing chambers) and the main arteries supplying the 
   lungs, liver and kidneys.  
   Marks 9

   (c) Which functions of the blood are principally concerned in the circulation through 
   (i) the lungs, (ii) the liver, (iii) the kidneys?  
   Marks 7

ANSWER to Question 1 (c)  
(i) the lungs
(ii) the liver

(iii) the kidneys

(If you need extra paper, ask the Invigilator for a supplementary sheet)
HIGHER GEOG. 1
(MAP)—Question 2

1963
SCOTTISH CERTIFICATE OF EDUCATION

GEOGRAPHY
Higher Grade (First Paper)
Thursday, 16th May—9.30 a.m. to 12 noon

SECTION A—QUESTION 2
(To be attempted by all candidates)

MAP
FILL THIS IN FIRST

Name of School or other Centre

Name of Candidate

TO BE PINNED INSIDE THE CANDIDATE'S BOOK OF ANSWERS AND THUS SENT TO THE DEPARTMENT

[OVER]

[10 (b)]
GEOGRAPHY
Higher Grade (First Paper)

ORDNANCE SURVEY MAP
TO GIVE A GRID REFERENCE CORRECT TO 100 METRES

The incidence of grid letters and numbers on this sheet

EXAMPLE

Estimate tenths Eastwards

Grid North

North

East

Take west edge of kilometre square in which point lies and read the large figures printed opposite this line on East or West margins. Estimate tenths Northwards.

Full 100 Metre Reference NY 235241

The above Full Reference is unique. For many purposes the first grid letter can be omitted, giving a reference Y 235241 which recurs at intervals of 500 Kilometres. If both grid letters are omitted, the resulting reference 235241 recurs at intervals of 100 Kilometres, unless the area concerned is sufficiently restricted, in which case the scale may make no scale use of them in the title and legend, hence grid letters are normally omitted.

Contours in Lakes are given in feet.

Heights are in feet above Mean Sea Level. Contours are at 50ft. intervals.

True North at the West edge of this sheet is 00°59′ 47″E of Grid North.

Mag. North from Grid North is 9°W (1963) decreasing by about 1° in six years

Made and printed by the Director General of the Ordnance Survey, Chessington, Surrey, 1963.
1963
SCOTTISH CERTIFICATE OF EDUCATION

ZOOLOGY
ORDINARY GRADE

Wednesday, 1st May—1.30 p.m. to 4.0 p.m.

QUESTION 8
(This question is optional to all candidates)

FILL THIS IN FIRST

Name of School (or Centre)

Name of Candidate

To be pinned inside the candidate’s book of answers and thus sent to the Department.
Zoology Ordinary—Question 8

8. The diagram below shows some of the main organs in a frog as seen when dissected from the ventral surface.

(a) Label these organs.
(b) Write a note on the portal systems of a frog. Insert and label in the given diagram the vessels of one of these systems.
(c) Explain the changes which take place in the composition of the blood as it flows through the capillaries of the intestinal wall.

Marks

5

11

4
Zoology Ordinary—Question 8

ANSWER to Question 8

(b) Note on portal systems of a frog

(c) [Please answer overleaf]
Zoology Ordinary—Question 8

(c) Explanation of changes in the composition of the blood as it flows through the capillaries of the intestinal wall.
1963
SCOTTISH CERTIFICATE OF EDUCATION

HISTORY

ORDINARY GRADE

Wednesday, 15th May—9.30 a.m. to 12 noon

MAP
for
Section VI—Question 62
(This question is optional to all candidates)

FILL THIS IN FIRST

Name of School (or Centre)

Name of Candidate

To be pinned to the back cover inside the candidate's book of answers and thus sent to the Department
Section VI—Question 62

62. The map on the opposite page shows Western Europe and the Western Mediterranean. Four territories, two towns and one feature are marked in red. All were of importance in the events leading to the war of 1914–18.

Questions

(i) Name the towns and feature marked 1, 2 and 3. 3
(ii) Name the territories marked A, B, C and D. 4
(iii) Briefly give reasons why Britain was interested in territory A. 3
(iv) Explain why territory B was a cause of international friction. 3
(v) Give a fuller account and explanation of the disputes that arose in the early twentieth century over either territory C or territory D. 7

ANSWERS

(i) 1. .................................................. 2. ..................................................

3. ..................................................

(ii) A .................................................. B ..................................................

C .................................................. D ..................................................

(iii)
Section VI—Question 62—continued

(If you need extra paper, ask the Invigilator for a supplementary sheet)

Page four
ORDY. GEOG.
(O.S. MAP)

1963
SCOTTISH CERTIFICATE OF EDUCATION

GEOGRAPHY
Ordinary Grade

ORDNANCE SURVEY MAP
DIRECTIONS.

1. Cut out according to instructions on the pattern.
2. Prepare pocket and apply to right side front.
3. Join and stitch front panel to side fronts.
4. Complete left side seam and insert zip.
5. Join seam at right side.
6. Prepare and apply waistband.
7. Fasten band with hook and bar.
8. Complete part of hem.
INSTRUCTIONS TO CANDIDATES

1. Read carefully the instructions at the head of each exercise.

2. Any defect in the machine should be pointed out to the Invigilator who will send to the examiners a certificate giving particulars of the defect and of the loss of time caused thereby.

3. Each exercise should be begun on a fresh page.

4. Any spoiled work should be cancelled by drawing a line through it.

5. The tests are to be worked in the following order:
   (1) The Copying Test.
   (2) The Accuracy Test.

6. The value attached to each question is shown in brackets after the question.
From sea-level a climb of 1,000 ft. results in a fall in the barometric height of about 1 in. The fall becomes gradually less as you ascend, until at 27,000 ft. the pressure is 10 1/2 in. of mercury. Much information about the upper atmosphere has been obtained from manned and free balloons; the latter (radio sondes) reached heights of 20 miles, and, being equipped with small transmitters, have been able to send a continuous record of atmospheric pressure, temperature and moisture content back to earth. Evidence from meteors (‘shooting stars’) shows that the atmosphere extends to at least 100 miles.

Meteors are small bodies in space, cold and dark until they become white hot through entering the earth’s atmosphere at colossal speed; by taking photographs of them from different points, their height has been estimated and found to be approximately 100 miles. The general features of the atmosphere are illustrated in Fig. 8.5. It is found that temperature falls evenly to —53°C at a height of about 8 miles in temperate latitudes, after which the temperature remains almost constant to a height of about 20 miles.

Manned balloons have reached heights of 10 1/2 miles (Piccard, 1932) and 13 1/2 miles (Prokofiev, 1933) and free balloons have reached heights of 20 miles. Greater heights are now being reached by powerful rockets, from which instruments return to earth by parachute.
QUESTION 2. ACCURACY TEST

Instructions (not to be typed)

Type your name, the name of the school or centre, and the grade of presentation at the top of a sheet of A4 paper.

Set the marginal stops for a 60-space line.

Set the line-space lever for double spacing.

The whole of the passage printed below may be attempted, but no additional marks will be gained by typing any part of the passage a second time.

The use of an eraser is not permitted.

At the conclusion of this test your typescript is to be handed to the Invigilator.

Strokes

The staff engaged in the various operations of a wholesale firm is an important element in its organisation. The question of sales staff has already been dealt with very fully as they are of vital importance in wholesale firms by bringing in the orders. At the same time, although the staff engaged in executing orders are not so prominent, they also deserve to be looked after by the management.

Some firms were found to have tried to ease the work of such staff by carefully organising the various operations. In many cases routine attitudes have to be overcome and deeply ingrained habits eradicated. In some cases, also, reorganisation means cutting down staff; this, of course, is what the management is aiming at, but it raises the social problem of redeployment, a matter which goes beyond the limits of the individual firm.

This problem is closely connected with the training of staff and is being considered by some wholesalers; trade associations and study centres have started up training and refresher courses. The Mission feels that these efforts should be co-ordinated and extended.

From the material standpoint, the Mission found that progressive firms in all countries were anxious to improve working conditions. In countries like Switzerland and Sweden the Mission found the offices or working sites well planned, the canteen attractive and the rest and entertainment rooms and toilet facilities excellent. The employees undoubtedly appreciate these amenities at their place of work.

In fewer cases, the workers were given financial interest in the firm's results. Bonuses, connected more or less closely with operating results or turn-over, are fairly common in France and Italy but, with the few exceptions mentioned above, are non-existent in the firms visited in other countries. This raised the whole problem of remuneration; attitudes to this problem vary very considerably from country to country in relation to such factors as the average standard of living, the influence of trade unionism and the general view of a welfare economy.

Representatives and travellers usually form the principal link between the wholesaler and his customers.
INSTRUCTIONS TO CANDIDATES

1. Read carefully the instructions at the head of each exercise.

2. Any defect in the machine should be pointed out to the Invigilator who will send to the examiners a certificate giving particulars of the defect and of the loss of time caused thereby.

3. Each exercise should be begun on a fresh page.

4. Any spoiled work should be cancelled by drawing a line through it.

5. The tests are to be worked in the following order:—
   (1) The Copying Test.
   (2) The Accuracy Test.

6. The value attached to each question is shown in brackets after the question.
QUESTION 1. COPYING TEST

Instructions (not to be typed)

Type your name, the name of the school or centre, and the grade of presentation at the top of a sheet of A4 paper.
Set the marginal stops for a 60-space line.
Make one copy, in **double** line spacing, of the passage printed below.
No credit will be given for completing this test in less than the time allowed.
No part of the test is to be re-typed.
The use of an eraser is **not** permitted.
At the conclusion of this test, your typescript is to be handed to the Invigilator.

This is always a risk in winter for the 34 manned light vessels at sea under Trinity House management. Later on the suburban Christmas will not be complete without news stories of the overdue relief of the Wolf Rock or some other buffeted and isolated lighthouses.

There are 230 lightkeepers of all ranks, serving 24 shore and 31 rock stations, and 400 men in light vessels in the Trinity House service. Most of them earn rather less than the £13 4s. a week of a London bus conductor (before overtime). The basic scale for a principal lighthouse keeper rises to a maximum of £618 a year (on the 1955 scale it was £492). An assistant keeper earns a basic £543 after 20 years’ service.

There are numerous small allowances (4s. 9d. a day for victualling at rock lighthouses, 2d. an hour when the fog siren is sounding), and a free life assurance premium (£3 a year), but land jobs still carry far better overtime opportunities. The master of a lightship with four years’ service gets £658.

(15)
QUESTION 2. ACCURACY TEST

Instructions (not to be typed)

Type your name, the name of the school or centre, and the grade of presentation at the top of a sheet of A4 paper.

Set the marginal stops for a 60-space line.

Set the line-space lever for double spacing.

The whole of the passage printed below may be attempted, but no additional marks will be gained by typing any part of the passage a second time.

The use of an eraser is not permitted.

At the conclusion of this test your typescript is to be handed to the Invigilator.

I always liked to see a fight between bulls or bears or wild boars or almost any wild animals. Now, I got so excited that I jumped up from the table and went to the door and stood listening. I'd made up my mind that, if the bulls met and started a fight, I was going to see it. There was still plenty of careless weeds and crabglass that needed hoeing out of the corn, but I guess I could let them go long enough to see a bull fight.

Our cabin stood on a high knoll about a hundred yards above the spring. Years ago, Papa had cleared out all the brush and trees from around it, leaving a couple of live-oaks near the house for shade. That was so that he could get a clear shot at any Comanche or Apache coming to scalp us. And while I stood there at the door, the first bull entered the clearing, right where Papa had one time shot a Comanche off his horse.

He was a leggy, mustard-coloured bull with black freckles speckling his jaws and the underside of his belly. He had one great horn set for hooking, while the other hung down past his jaw like a tallow candle that had drooped in the heat. He was what the Mexicans called a "droop horn". He trotted out a little way into the clearing, then stopped to drop his head low. He went to snorting and shaking his horns and pawing up the dry dirt with his forefeet. He flung the dirt back over his neck and shoulders in great clouds of dust.

I couldn't see the other bull yet, but I could tell by the sound of him that he was close and coming in a trot. I hollered back to Mama and Little Arliss and climbed up and took a seat on the top rail. Mama and Little Arliss came and climbed up to sit beside me.
INSTRUCTIONS TO CANDIDATES

1. Read carefully the instructions at the head of each exercise.

2. Any defect in the machine should be pointed out to the Invigilator who will send to the examiners a certificate giving particulars of the defect and of the loss of time caused thereby.

3. Each exercise should be begun on a fresh page.

4. Any spoiled work should be cancelled by drawing a line through it.

5. At the close of the examination you will receive from the Invigilator your typescripts of the Copying and Accuracy Tests. These must then be inserted in your examination book, along with your other typescripts, and handed to the Invigilator.

6. The value attached to each question is shown in brackets after the question.
QUESTION 3

Type your name, the name of the school or centre, and the grade of presentation at the top of a sheet or sheets of A5 paper.

Answers to the following questions must be typed.

Number your answers to correspond with the questions.

(a) Set out in one line, spaced evenly, the following figures in Roman numerals:—

9 24 113 557 1,320

(b) Give the titles of three books, not dictionaries, which a typist should have readily to hand and describe one purpose for which each might be used.

(c) In your capacity as secretary of the school tennis club, prepare the minutes of the annual general meeting. You may assume that three items of normal business were transacted.
1. Type your name, the name of the school or centre, and the grade of presentation on the back of the sheets in the top left-hand corner.

2. Your employer, Mr. W. D. Brown, states that he has received a letter dated 15th April, 1963, from Professor D. Blackhurst of the Chair of Economic History in the University of the Caribbean, Port of Spain, Trinidad, asking for certain information about the relative importance of different sizes of retailing units in Europe. Mr. Brown, who is secretary of the British Retail Trades Research Association, asks you (a) to set out neatly and attractively on A4 paper the statement below; and (b) to prepare for his signature a short letter on A5 paper, to be sent to Professor Blackhurst along with the statement.

### Size Dispersion of Retailing Units in Great Britain and Denmark

<table>
<thead>
<tr>
<th>Size of Unit (in £)</th>
<th>Great Britain (1950)</th>
<th>Denmark (1944)</th>
</tr>
</thead>
<tbody>
<tr>
<td>£</td>
<td>Proportion of Total</td>
<td>Proportion of Total</td>
</tr>
<tr>
<td></td>
<td>Units</td>
<td>Retail Turnover</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------</td>
<td>----------------</td>
</tr>
<tr>
<td>Under £2,500</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>£2,500 and under £5,000</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>£5,000 and under £10,000</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>£10,000 and under £25,000</td>
<td>16</td>
<td>26</td>
</tr>
<tr>
<td>£25,000 and over</td>
<td>6</td>
<td>42</td>
</tr>
</tbody>
</table>

(Kr. 19.25 = £1)


(24)
QUESTION 5

1. Type your name, the name of the school or centre, and the grade of presentation on the back of the sheets in the top left-hand corner.

2. Set out the following letter neatly and attractively on A4 paper with one carbon copy. Insert today’s date and your teacher’s and your own initials as dictator and typist respectively. Make any necessary corrections.

The British Federation of Builders
Great Tower Street,
London E.C.3.

Mons. Emile Lournard
Secretary,
European Federation of Building Institutes
2 Avenue Pascal,
Paris, 16e

Dear Sir,

Building Costs in Great Britain

The report to which you refer in your letter of 1st May, 1963, was written by a Mr. L. Needleman and published in the Economic Review in Nov, 1961. This publication may be obtained, if still in print, from the Nat. Inst. for Econ. and Soc. Research.

The writer who based his figures on the building expenses of local authorities, has come to the conclusion that two-thirds of all households in this country cannot afford to pay the rent of a new house and 90% cannot afford to buy one out of income. If anything, the calculations are on the optimistic side, since local authorities are prepared to spread the cost of a new house over sixty years. On this basis, assuming that they could borrow money at 6%, they could just break even without a subsidy on a three-bedroom house at a rent of some £214 a year. Private developers, who would expect their money back over twenty years, are in fact hardly building any houses for letting.

In the following table it has been assumed that a household cannot “afford” to spend more than 25% of its basic income in payment for accommodation.
Cost of Renting and Buying Houses

<table>
<thead>
<tr>
<th>No of bedrooms in house (area in sq. ft. in brackets)</th>
<th>Cost to Buy</th>
<th>Cost to Rent</th>
<th>Total annual limit</th>
<th>Lower income limit required</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 (740)</td>
<td>2,550</td>
<td>256</td>
<td>192</td>
<td>1,034</td>
</tr>
<tr>
<td>3 (1,000)</td>
<td>2,500</td>
<td>281</td>
<td>214</td>
<td>1,136</td>
</tr>
<tr>
<td>4 (1,210)</td>
<td>3,000</td>
<td>314</td>
<td>258</td>
<td>1,318</td>
</tr>
</tbody>
</table>

The writer concludes that the building industry is likely to fall into a decline unless it can be re-organised so that costs of building houses can be reduced drastically. He shows that while 200,000 houses are being added each year to the stock of houses in the U.K., the number of new householders will rise by only 100,000. Saturation point in the housing market may, he argues, be much nearer than most people think. He recommends that, in order to avoid unemployment in the building trades, the government should have ready plans for an extensive road building programme. Labour, he states, is highly mobile from the one activity to the other and many of the larger firms are engaged in both.

Yours faithfully,

The British Federation of Builders

Secretary.

(20)
INSTRUCTIONS TO CANDIDATES

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6. The value attached to each question is shown in brackets after the question.
QUESTION 3

Type your name, the name of the school or centre, and the grade of presentation at the top of a sheet of A5 paper.

Answers to the following questions must be typed.
Number your answers to correspond with the questions.

1. State clearly what is meant by the following instructions in manuscript work:—
   l.e., trs., stet., ital., n.p.

2. Type the following sentences inserting the necessary punctuation marks:—
   (a) The word knowledge strictly employed implies three things namely truth
       proof and conviction
   (b) He said like a man making a surprising discovery you look very much better

3. Give three rules which must be observed in the typing of poetry. (12)
QUESTION 4

1. Type your name, the name of the school or centre, and the grade of presentation on the back of the sheets in the top left-hand corner.

2. Set out the following letter neatly and attractively on A4 paper, making one carbon copy. Insert today's date and make any necessary corrections.

3. Address the envelope supplied and attach it to the letter.

R.J. Maxwell, Esq., A.R.A.,
"Cannmore"
24, Fairfax Avenue,
Limbithgow.

Dear Sir,

Proposed Garages off Fairfax Drive, Limbithgow

Three estimates have now been received from three reliable firms as noted below. Each firm was supplied with a copy of the site plans of the proposed building, attached. From the estimates which are also attached, it will be seen that only George May & Co., have given detailed specifications. So far as these can be seen they appear to provide a much superior job. As we do not intend to employ our architect, it is highly desirable that the work should be let out in this manner since it can be seen whether it is in fact done to specification.

<table>
<thead>
<tr>
<th>Quotation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>George May &amp; Co. £1,820: 2: 4</td>
<td>Plans to be prepared and submitted by them for Dean of Guild approval.</td>
</tr>
<tr>
<td>Robert Frame, Ltd. £1,814: 1: 6</td>
<td>Architects fees and Dean of Guild expenses omitted.</td>
</tr>
<tr>
<td>Gray &amp; English £1,375: 1: -</td>
<td>&quot;We have made no allowance for external excavations.&quot;</td>
</tr>
</tbody>
</table>

Now perhaps you would give me your views and if your neighbours concerned, on the estimates at a very early date.

Yours truly,

Mason & Mason, Ltd.

Director
Planning for Growth in Pakistan

The first five year plan for economic advance ran from 1955 to 1960 with development expenditures of £386 million in the public sector and £300 million in the private sector. The results were, nevertheless, disappointing and in making the following estimates for the second plan, now in its third year, the reasons for the failure of the first were borne in mind.

Cost of Second Five Year Plan
(1960-65: revised estimates)
£ million

<table>
<thead>
<tr>
<th></th>
<th>Govt. financed</th>
<th>Private financed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture and village aid</td>
<td>181</td>
<td>68</td>
<td>249</td>
</tr>
<tr>
<td>Water &amp; power</td>
<td>311</td>
<td>19</td>
<td>330</td>
</tr>
<tr>
<td>Industry</td>
<td>110</td>
<td>245</td>
<td>355</td>
</tr>
<tr>
<td>Fuels &amp; minerals</td>
<td>34</td>
<td>41</td>
<td>75</td>
</tr>
<tr>
<td>Transport and communications</td>
<td>204</td>
<td>94</td>
<td>301</td>
</tr>
<tr>
<td>Housing and settlements</td>
<td>149</td>
<td>115</td>
<td>264</td>
</tr>
<tr>
<td>Education, manpower &amp; welfare</td>
<td>108</td>
<td>12</td>
<td>120</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,094</strong></td>
<td><strong>627</strong></td>
<td><strong>1,724</strong></td>
</tr>
</tbody>
</table>

(24)
1963
SCOTTISH CERTIFICATE OF EDUCATION

ZOOGOLOGY
ORDINARY GRADE

Wednesday, 1st May—1.30 p.m. to 4.0 p.m.

QUESTION 7
(This question is optional to all candidates)

FILL THIS IN FIRST

Name of School (or Centre)

Name of Candidate

To be pinned inside the candidate's book of answers and thus sent to the Department.

[ 100 (a) ]
Zoology Ordinary—Question 7

7. The accompanying diagram shows the outline and some of the organs seen when an earthworm is dissected along the dorsal surface.

(a) Label the structures shown. Insert and label any other structures which would be visible to the naked eye in this dissection. 10

(b) Describe the role of the pharynx in the feeding of the earthworm. 5

(c) What is the clitellum, where is it found, and what are its functions? 5
Zoology Ordinary—Question 7

ANSWER to Question 7

(b) The role of the pharynx.

(c) The clitellum.
1963
SCOTTISH CERTIFICATE OF EDUCATION

To be distributed with the

TECHNICAL DRAWING

Higher Grade

Question Paper

FIGURES

[112(a)]
FIG. 2.

DUCT

SHEETMETAL COWL

ELEVATION

6'-6'

FIG. 3

PLAN

INCOMPLETE ELEVATION
1963
SCOTTISH CERTIFICATE OF EDUCATION

MUSIC
Higher Grade—(First Paper)
Thursday, 23rd May
10.15 a.m. to 12.15 p.m.

Fill in number
of seat occupied
at examination

Full Name of School or Other Centre
(including name of town)
Surname of Candidate

Christian Names

Date of Birth (day, month and year)

FILL IN THE ABOVE AND READ WHAT IS PRINTED BELOW

1. Before handing in your book, enter above the numbers of the questions you have attempted, leaving the column for Examiner's Marks blank.

2. All the answers to this paper are to be written in the spaces provided in this examination book, and must be written clearly and legibly in ink.

3. All candidates must answer THREE questions; the question in Section I, ONE question from Section II, and ONE question from Section III.

4. The rough work, if any should be necessary, as well as the fair copy, is to be written on the pages provided in this book.

5. The value attached to each question, or to each part of a question, is shown in brackets after the question.

[91]
SECTION I

All candidates must answer this question

1. Harmonise the following melody for S.A.T.B. throughout. You may use this page for rough work if you wish, but the fair copy must be written on page three.

Marks (30)
(Question 1—Fair copy of answer)
SECTION II

Answer ONE question only in this section

2. Complete the following as a two-part piece for either violin and 'cello, or for flute and bassoon. Add indications of bowing or of tonguing, whichever are appropriate. Indicate your choice of instruments at the beginning of the first group of staves. You may use this page for rough work if you wish, but the fair copy must be written on page five. (20)
3. Read this extract from Mozart's "Requiem", try to hear it mentally, then answer the questions on the opposite page.
(a) What contrapuntal device is a prominent feature of this passage?

(b) There are two instances of the use of this device. Insert "A" above the appropriate stave at the point at which the first instance ends, and "B" at the point at which the second instance begins.

(c) How does the second instance differ from the first, apart from the order in which the voices enter, and apart from the differences in thematic material?

(d) Indicate by means of _____ an example of a melodic sequence.

(e) Is this sequence "real" or "tonal"? State a reason for your answer.

(f) Indicate, by reference to bar numbers and to beats, two examples of a suspension and its resolution.

(g) Insert "X" above or below an example of an accented passing note.

(h) Indicate, by reference to bar numbers and to beats, the duration of an example of a pedal point.

(k) Describe the following chords:
   (i) The chord which is the harmonic basis of bar 5;
   (ii) the chord on the second quaver of bar 6;
   (iii) the chord on the first beat of bar 8.

Total marks = (20)
You may use this page for rough work for Question 4 if you wish, but the fair copy must be written on page nine.
SECTION III

Answer ONE question only in this section

4. Write a melody for an average high voice or for an average low voice to suit the following stanza. State at the beginning for which kind of voice your setting is intended. Indicate the modulations, insert expression marks, and place at the beginning a musical term to indicate speed or style. Write each syllable of the words below the note or notes for which it is intended to be sung.

"It was Earl Haldan's daughter,
She looked across the sea;
She looked across the water;
And long and loud laughed she:
'The locks of six princesses
Must be my marriage fee,
So hey bonny boat, and ho bonny boat!
Who comes a-wooing me?"

Charles Kingsley.

(Question 4—Fair copy of answer)

(If extra staves are required use those provided on page twelve)
You may use this page for rough work for Question 5 if you wish, but the fair copy must be written on page eleven.
5. Expand the following into a melody in either binary or ternary form of sixteen bars. Indicate modulations, insert phrasing and expression marks, and add a musical term to indicate speed or style.

(Question 5—Fair copy of answer)

(If extra staves are required use those provided on page twelve)

Page eleven
1963
SCOTTISH CERTIFICATE OF EDUCATION

MODERN STUDIES

Ordinary Grade

Tuesday, 28th May—9.30 a.m. to 12.15 p.m.

Reference Maps Nos. 1 to 5
Limit of the main built-up area of London
MODERN STUDIES
Ordinary Grade

ORDNANCE SURVEY MAP