

678 16
SECONDARY EDUCATION (SCOTLAND).

LEAVING CERTIFICATE EXAMINATION
(INCLUDING DAY SCHOOL CERTIFICATE (HIGHER)
GENERAL PAPER).

EXAMINATION PAPERS 1928.



LONDON:

PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE.

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1928.

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AUGUST, 1928.

PUBLICATIONS OF THE DEPARTMENT.

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Amendment (1928) of the Code of Regulations for Day Schools in Scotland, 1923. S.R. & O., 1928, No. 329, S. 19. Price 1*d.*; post free, 1½*d.*

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Regulations for the Preliminary Education, Training and Certification of Teachers for various grades of Schools, 1924—Amendment of, 1927. S.R. & O., 1927. No. 1154, S. 59. Price 1*d.*; post free, 1½*d.*

Superannuation Scheme for Teachers, 1919. S.R. & O., 1919, No. 1105. Price 1*d.*; post free, 1½*d.*

Superannuation Scheme for Teachers, 1919—Amendment of, 1922. S.R. & O., 1922, No. 466, S. 21. Price 1*d.*; post free, 1½*d.*

Superannuation Scheme for Teachers, 1919—Amendment of, 1923. S.R. & O., 1923, No. 404, S. 32. Price 1*d.*; post free, 1½*d.*

Superannuation Scheme for Teachers, 1919—Amendment of, 1925. S.R. & O., 1925, No. 441, S. 45. Price 1*d.*; post free, 1½*d.*

Superannuation Scheme for Teachers (Scotland), 1926. S.R. & O., 1926, No. 363, S. 13. Price 3*d.*; post free, 3½*d.*

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SECONDARY EDUCATION (SCOTLAND).

LEAVING CERTIFICATE EXAMINATION

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LEAVING CERTIFICATE EXAMINATION

(including Day School Certificate (Higher)
General Paper).

The Leaving Certificate Examination (including the General Paper set in connection with the award of the Day School Certificate (Higher)) is held annually by the Scottish Education Department. In 1928 it commenced on Monday, 19th March.

Candidates must be pupils of a School at which, or in connection with which, the Examination is held, and must have been in regular attendance at the School from January to the date of the Examination.

EXAMINATION PAPERS

DAY SCHOOL CERTIFICATE
(HIGHER), 1928

GENERAL PAPER

Monday, 19th March—10 A.M. to 12 NOON

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

N.B.—Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

1. Write a short composition, to fill about a page of your book, on any *one* of the following :—

(a) A Sunset.

(b) The Construction and Use of a Mercury Barometer.

(c) The Story of David and Goliath.

(d) A Busy Street Scene.

(30)

2. Read the following passage carefully and answer the questions that follow it:—

I said that at sea all is vacancy; I should correct the impression. To one given to day-dreaming, and fond of losing himself in reveries, a sea-voyage is full of subjects for meditation; but then they are the wonders of the deep and of the air, and rather tend to abstract the mind from worldly themes. I delighted to loll over the quarter-railing, or climb to the maintop of a calm day, and muse for hours together on the tranquil bosom of a summer's sea; to gaze upon the piles of golden clouds just peering above the horizon, fancy them some fairy realms, and people them with *a creation of my own*; to watch the gentle, undulating billows, rolling their silver volumes, as if to die away on those happy shores.

There was a delicious sensation of mingled security and awe with which I looked down from my giddy height on the monsters of the deep at their uncouth gambols; shoals of porpoises tumbling about the bow of the ship; the grampus slowly heaving his huge form above the surface; or the ravenous shark, darting like a spectre through the blue waters. My imagination would conjure up all that I had heard or read of the watery world beneath me; of the finny herds that roam its fathomless valleys; of the shapeless monsters that lurk among the very foundations of the earth; and of those wild phantasms that swell the tales of fishermen and sailors.

Sometimes a distant sail, gliding along the edge of the ocean, would be another theme of idle speculation. How interesting *this fragment of a world*, hastening to rejoin the great mass of existence! What a glorious monument of human invention, which has in a manner triumphed over wind and wave; has brought the ends of the world into communion; has established an interchange of blessings, pouring into the sterile regions of the north all the luxuries of the south; and has thus bound together those scattered portions of the human race between which nature seemed to have thrown *an insurmountable barrier*.

(a) Give briefly, in your own words, the content of each of the three paragraphs quoted above, and state precisely what it is, in each case, that stirs the writer's fancy, imagination or speculation.

(b) Explain the expressions printed in italics.

(c) Give the roots, with meanings, of any *five* of the following :—

subjects	uncouth
abstract	distant
surface	phantasms
undulating	fragment.

(d) Give the exact meaning of the following words as used in this passage :—Vacancy, reveries, muse, volumes, gambols, conjure, phantasms, swell, communion, sterile. (40)

3. Make a grammatical analysis of the following sentences :—

(a) From Branksome's Towers the watchman's eye
Dun wreaths of distant smoke can spy,
Which, curling in the rising sun,
Shewed southern ravage had begun.

(b) He told me stories that sounded so much like Baron Munchausen's that I was sure he was making fun of me. (5)

4. Compose a continuous paragraph of about 150 words entitled "A Ruined Castle" and containing the following words, correctly used, in any order you please :—

Gloaming, eerie, precipitous, mouldering,
lichen, moat, relic, ancestors, defence, antiquity. (10)

5. Explain the following expressions, as they are used in History or in Geography :—The Restoration; The Extension of the Franchise; The Entente Cordiale; Hemisphere; Tundras. (15)

LEAVING CERTIFICATE EXAMINATION, 1928

ENGLISH

(INCLUDING LITERATURE AND HISTORY)

(FIRST PAPER (a)—COMPOSITION)

Monday, 19th March—10 A.M. to 11 A.M.

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

N.B.—Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

Write a composition on *any one* of the following subjects:—

(a) Mr. Dooley, the American humorist, declares that it does not matter what you teach children, so long as they don't want to learn it.

How far is this true and to what extent is it acted on?

(b) What has given Knox, or Burns, or Scott his peculiar place in the heart of the Scottish people?

(c) Take any one of the three school terms—the autumn term, the spring term, or the summer term—and discuss its attractions and its drawbacks.

(d) "One of the pleasantest things in the world is going a journey; but I like to go by myself. I can enjoy society in a room; but out of doors, nature is company enough for me."

(40)

ENGLISH

(INCLUDING LITERATURE AND HISTORY)

(FIRST PAPER (b)—INTERPRETATION AND LANGUAGE)

Monday, 19th March—11.15 A.M. to 12.45 P.M.

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

N.B.—Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

1. Read the following passage through and then answer the questions that follow it:—

“The chiefest instrument of human communion is speech, because thereby we impart mutually one to another the conceits of our reasonable understanding. And for that cause, since beasts are not hereof capable, forasmuch as with them we can use no such conference, it is of Adam said that amongst the beasts ‘he found not for himself any meet companion.’ Civil society doth more content the nature of man than any private kind of solitary living, because in society this good of mutual participation is so much larger than otherwise. Herewith notwithstanding we are not satisfied, but we covet (if it might be) to have a kind of society and fellowship even with all mankind. Which thing Socrates intending to signify professed himself a citizen, not of this or that commonwealth, but of the world. And an effect of that very natural desire in us (a manifest token that we wish after a sort an universal fellowship with all men) appeareth by the wonderful delight men have, some to visit foreign countries, some to discover nations not heard of in former ages, we all to know the affairs and dealings of other people, yea to be in league of amity with them.”

RICHARD HOOKER.

(a) Summarize the argument of this passage clearly in good modern English, your summary to be not more than half the length of the original—*i.e.*, about 100 words in all.

(b) Explain the precise meaning of *communion*, *conceits*, *conference*, *civil*, *commonwealth*, *amity* as these

words are used above, adding the derivation where you can.

(c) Point out three instances of archaism, excluding any words under (b); write a brief note on the phrase "this good of mutual participation"; and say who Socrates was.

(d) Give a general grammatical analysis of the second sentence ("And for that cause companion"). (30)

2. Read the following passage through and then answer the questions that follow it:—

"Books are not seldom talismans and spells,
 By which the magic art of shrewder wits
 Holds an unthinking multitude enthralled.
 Some to the fascination of a name
 Surrender judgment hoodwinked. Some the style
 Infatuates, and through labyrinths and wilds 6
 Of error leads them, by a tune entranced; 7
 While sloth seduces more, too weak to bear
 The insupportable fatigue of thought,
 And swallowing therefore without pause or choice 10
 The total grist unsifted, husks and all." 11

WILLIAM COWPER.

(a) Rewrite lines 4 to 7 ("Some entranced") in prose order without making any change in the actual words.

(b) Explain in three plain sentences the three causes which, in Cowper's view, make people read unthinkingly.

(c) Distinguish shades of meaning in "spell-bound," "enthralled," "fascinated," "hoodwinked," "infatuated," "entranced." Refer in each case to the original meaning of the word as indicated by the derivation.

(d) What image is suggested to you by lines 6 and 7? What image is suggested to you by lines 10 and 11? (20)

3. What do the figurative expressions italicised in the following sentences mean, and from what sports or pastimes are they derived:—

(a) These observations, sir, are quite *beside the mark*.

(b) On the heights above Corunna Moore *turned at bay*.

- (c) In his next satire Pope *flew at bigger game*.
 (d) At the Bursary competition five candidates
entered the lists from this small school.
 (e) The Premier *made a palpable hit* in his reply
 to Mr. S. (10)

ENGLISH
 (INCLUDING LITERATURE AND HISTORY)
 (SECOND PAPER—LITERATURE)

Monday, 19th March—1.45 P.M. to 2.45 P.M.

Answer the FIRST question, and ANY TWO of the others.
 The value attached to each question is shown in brackets
 after the question.

N.B.—Write legibly and neatly, and leave
 a reasonable space between the lines.
 Marks will be deducted for bad writing.

SECTION A.

All candidates must attempt this question.

- 1.—(a) Contrast the two rivers described in the
 following passages.
 (b) Comment briefly on the epithets “*brawling
 Coil*,” “*stately Lugar*,” “*the hushed Chor-
 asmian waste*,” “*the shorn and parcelled
 Oxus*,” “*the new-bathed stars*.”

I. *The River Ayr in Spate.*

“When heavy, dark, continued, a’-day rains
 Wi’ deepening deluges o’erflow the plains;
 When from the hills where springs the brawling Coil⁽¹⁾,
 Or stately Lugar’s⁽¹⁾ mossy fountains boil,
 Or where the Greenock⁽¹⁾ winds his moorland course,
 Or haunted Garpal⁽¹⁾ draws his feeble source,
 Arous’d by blust’ring winds an’ spotting thowes⁽²⁾,
 In mony a torrent down his snaw-broo⁽³⁾ rowes⁽⁴⁾;
 While crashing ice, borne on the roaring spate,
 Sweeps dams, an’ mills, an’ brigs, a’ to the gate⁽⁵⁾;
 And from Glenbuck, down to the Ratton-key,
 Auld Ayr is just onè lengthen’d tumbling sea . . .”

(1) Coil, Lugar, Greenock, Garpal = tributaries of the Ayr.

(2) thowes = thaws. (3) snaw-broo = snow-broth, melted snow.

(4) rowes = rolls.

(5) a’ to the gate = all before it.

II. *The River Oxus.*

“ But the majestic river floated on,
 Out of the mist and hum of that low land,
 Into the frosty starlight, and there moved,
 Rejoicing, through the hushed Chorasman waste,
 Under the solitary moon;—he flowed
 Right for the polar star, past Orgunjè,
 Brimming, and bright, and large; then sands begin
 To hem his watery march, and dam his streams,
 And split his currents; that for many a league
 The shorn and parcelled Oxus strains along
 Through beds of sand and matted rushy isles—
 Oxus forgetting the bright speed he had
 In his high mountain cradle in Pamir,
 A foiled circuitous wanderer—till at last
 The longed-for dash of waves is heard, and wide
 His luminous home of waters opens, bright
 And tranquil, from whose floor the new-bathed stars
 Emerge, and shine upon the Aral Sea.”

(20)

SECTION B.

Two questions should be attempted from this Section.

2. “ Chaucer makes us love the noble characters in his poems, and feel with kindness towards the baser and ruder sort.” Discuss this dictum generally, and illustrate it by reference to *one* character of each type; quote if you can. (10)

3. It is said that women play a more important part in Shakespeare’s comedies than in his tragedies. Is this true of such plays as you have read? (10)

4. Choose *any one* of these imaginary places; name the book in which it occurs; tell where it is supposed to be situated; and describe it briefly as you have pictured it to yourself:—Pandemonium; The Valley of the Shadow of Death; Laputa; Auburn; Wolf’s Crag; Cranford; The House of Shaws. (10)

5. What birds have been favourite subjects in lyric poetry? Refer to instances in English or Scottish poetry, with authors’ names. What character does the poet find in the bird, or its song, in *two* of these instances? (10)

6. Choose *any one* of these essayists, and remark briefly on his choice of subjects, his purpose in writing, and his character as revealed in his essays:—Bacon, Addison, Dr. Johnson, Hazlitt, Lamb, Thackeray. (10)

7. Tell what you know of the works of *any one* of these living authors:—Mr. Bernard Shaw, Mr. John Galsworthy, Mr. Rudyard Kipling, Sir J. M. Barrie. (10)

8. Describe *any two* of the following verse-forms:—Elegiac Quatrain; Rhyme Royal; the Burns Stanza; the Spenserian Stanza; the Shakespearean Sonnet; the Miltonic Sonnet. Name *two* poems written in the verse-forms which you describe (one for each); and quote a few lines from both. (10)

ENGLISH

(INCLUDING LITERATURE AND HISTORY)

(THIRD PAPER—HISTORY)

Monday, 19th March—3 P.M. to 4 P.M.

All candidates should attempt THREE questions, viz., the question in Section A and two questions from Section B. The value attached to each question is shown in brackets after the question.

N.B.—Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

SECTION A.

This question should be attempted by all candidates.

1. Select *any five* of the following events. On each of those which you select write a very short paragraph (of two or three sentences only) to show why it is regarded as a critical event in British or European History:—

The Coronation of Charlemagne (800 A.D.); the Battle of Carham; the Battle of Bosworth; the Arrest of the Five Members; the Treaty of Utrecht; the Surrender at Yorktown; the Congress of Vienna; the Battle of Sedan (1870 A.D.). (10)

SECTION B.

Two questions should be attempted from this Section. The questions may be taken from any period; they need not both be taken from the same period.

(EARLY PERIOD—from 55 B.C. to 1485 A.D.)

2. Indicate the historical importance of *any two* of these famous churchmen :—

Columba, Augustine, Anselm, Becket, Wycliffe.

(15)

3. "The Norman Conquest introduced Feudalism into England, and ultimately into Scotland as well." Criticize this statement.

(15)

4. How is the history of the English Parliament connected with (a) the reign of Edward I., and (b) the rule of the House of Lancaster?

(15)

5. How did the Franco-Scottish alliance come into existence? Estimate its value to France and to Scotland respectively.

(15)

(MIDDLE PERIOD—from 1485 A.D. to 1763 A.D.)

6. Draw a map to illustrate *one* of the following, and explain the importance of the places you mark in connection with the events to which your map relates :—

(a) The Great Civil War in England (1642–1648).

(b) The Colonisation of North America up to 1760.

(15)

7. Show the importance of the following in religious history :—the dissolution of the monasteries, the Elizabethan settlement, the Clarendon Code.

(15)

8. How did James II. and VII. lose the thrones of England and Scotland?

(15)

9. Discuss *one* of the following topics :—

(a) The reasons for the greater strength of Jacobitism in Scotland than in England.

(b) The causes of the wars with France between 1689 and 1763.

(c) The rise of Prussia up to 1763.

(15)

(MODERN PERIOD—from 1763 A.D. to the present day.)

10. *Either*

(a) Give some account of the inventions which led up to the Industrial Revolution;

Or

(b) Explain the importance of the Navy in the Revolutionary and Napoleonic Wars. (15)

11. Discuss *either* the foreign *or* the domestic policy associated with the name of *any one* of the following statesmen :—

Canning, Peel, Palmerston, Disraeli, Salisbury. (15)

12. Contrast the history of the achievement of Italian unity with the history of the achievement of German unity. (15)

13. Trace the career of *one* of the following :—

Edmund Burke, Thomas Chalmers, Abraham Lincoln, David Livingstone, Cecil Rhodes. (15)

L A T I N

LOWER GRADE

Friday, 23rd March—10 A.M. to 12.30 P.M.

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

N.B.—Begin each question on a fresh page. Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

1. Translate into English :—

After the defeat of the Romans by Hannibal, the surviving consul Crispinus sends a dispatch to the Senate.

Crispinus, postquam in Bruttios⁽¹⁾ profectum Hannibalem sensit, exercitum, cui collega praefuerat, M. Marcellum Venusiam abducere iussit; ipse cum legionibus suis Capuam profectus, vix lecticae⁽²⁾ agitationem prae gravitate vulnerum patiens, Romam litteras

de morte collegae scripsit, quantoque ipse in periculo esset: se comitiorum⁽³⁾ causa non posse Romam venire, quia non viae laborem passurus videretur: de Tarento quoque sollicitum se esse, ne ex Bruttiiis Hannibal eo converteret agmen: legatos ad se esse mittendos, viros prudentes, cum quibus quae vellet de re publica loqueretur. hae litterae recitatae magnum et luctum morte alterius consulis et metum de altero fecerunt. itaque ad consulem tres legatos miserunt, qui nuntiare consuli sunt iussi, ut, si ad comitia ipse venire Romam non posset, dictatorem diceret⁽⁴⁾ comitiorum causa.

(25)

- (1) Bruttii = the country of the Bruttii. (2) litter.
 (3) elections. (4) appoint.

2. Translate into English:—

Ovid describes his place of exile, near the Black Sea, cold, uncivilised, barren.

Ut sumus⁽¹⁾ in Ponto, ter frigore constitit⁽²⁾ Hister,⁽³⁾
 facta est Euxini dura ter unda maris.

at mihi iam videor patria procul esse tot annos,

Dardana quot Graio Troia sub hoste fuit.

stare putes, adeo procedunt tempora tarde,

et peragit lentis passibus annus iter.

innumerae circa gentes fera bella minantur,

quae sibi non rapto⁽⁴⁾ vivere turpe putant.

nil extra tutum est. tumulus defenditur aegre

moenibus exiguis ingenioque⁽⁵⁾ loci.

cum minime credas, ut avis, densissimus hostis

advolat, et praedam vix bene visus agit.

est igitur rarus, rus qui colere audeat, isque

hac arat infelix, hac tenet arma manu.

(25)

- (1) While we have been. (2) has frozen. (3) the Danube.
 (4) on plunder. (5) ingenium = nature.

3. Translate into Latin:—

(1) On the following day the tenth legion attacked the enemy's camp.

(2) There can be no doubt that Caesar was a very brave man.

(3) The senate will send envoys to beg for peace.

(4) He said he was going to Syracuse⁽¹⁾ to buy bread.

(5) Have you heard how great the enemy's forces are?

(6) The river is so deep that the enemy are unable to cross it.

- (7) After killing his brother he fled to the woods with all speed.
- (8) What will you do at Rome? I hope you will see the consul. (24)

(1) Syracusae (plural).

4. Give the Latin words (with meanings) from which the following are derived:—

extortion, septennial, remorse, vaccinate, reptile, arable, tonsure, deciduous, manse, January, binocular, detective. (6)

LATIN

HIGHER GRADE—(FIRST PAPER)

Friday, 23rd March—10 A.M. to 12 NOON

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

N.B.—Begin each question on a fresh page. Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

Translate the following passages into English:—

1. *Cicero, in exile, commiserates with his wife Terentia, praises her for her courage, and blames himself for bringing misfortune on them all.*

Tullius Terentiae suae salutem dicit.

Et litteris multorum et sermone omnium perfertur ad me, incredibilem tuam virtutem et fortitudinem esse teque nec animi neque corporis laboribus defatigari. me miserum! te ista virtute, fide, probitate in tantas aerumnas⁽¹⁾ propter me incidisse! Tulliolamque⁽²⁾ nostram, ex quo patre tantas voluptates capiebat, ex eo tantos percipere luctus! nam quid ego de Cicrone⁽³⁾ dicam? qui, cum primum sapere coepit, acerbissimos dolores miseriasque percepit. quae si, ut scribis, fato facta putarem, ferrem paulo facilius, sed omnia sunt mea culpa commissa, qui ab iis me amari putabam qui invidebant, eos non sequebar qui petebant.⁽⁴⁾ quod si nostris consiliis usi essemus neque apud nos tantum valuisset sermo aut stultorum amicorum aut improborum,

beatissimi viveremus : nunc, quoniam sperare nos amici iubent, dabo operam, ne mea valetudo tuo labori⁽⁵⁾ desit. quanto fuerit facilius manere domi quam redire intellego, sed tamen non est desperandum. (35)

(¹) trouble, distress. (²) Cicero's little girl. (³) his boy.
 (⁴) sought my friendship. (⁵) efforts on my behalf.

2. *The Cave of Sleep.*

Est prope Cimmerios longo spelunca recessu,
 mons cavus, ignavi domus et penetralia Somni,
 quo numquam radiis oriens mediusve cadensve
 Phoebus adire potest. nebulae caligine mixtae
 exhalantur humo dubiaequae crepuscula⁽¹⁾ lucis.
 non vigil ales ibi cristati cantibus oris
 evocat Auroram, nec voce silentia rumpunt
 sollicitive canes canibusve sagacior anser ;
 muta quies habitat. saxo tamen exit ab imo
 rivus aquae Lethes, per quem cum murmure labens
 invitat somnos crepitantibus unda lapillis.
 ante fores antri fecunda papavera florent
 innumeraequae herbae, quarum de lacte soporem
 Nox legit et spargit per opacas umida terras.
 ianua, ne verso stridores cardine reddat,
 nulla domo tota, custos in limine nullus. (30)

(¹) twilight, gloaming.

3. *The fortune of war changes and the Romans carry the war into the country of the Carthaginians.*

C. Laelius nocte ad Hipponem Regium⁽¹⁾ cum accessisset, luce prima ad populandum agrum milites duxit. omnibus incuriose quasi pax esset agentibus magna clades est inlata ; nuntiique trepidi Carthaginem terrore ingenti complevere, classem Romanam Scipionemque imperatorem advenisse. cum nec quot naves vidissent, nec quanta manus agros popularetur, satis scirent, primo terror pavorque, dein maestitia animos incessit : tantum fortunam mutasse⁽²⁾, ut, qui modo ipsi exercitum ante moenia Romana habuissent victores stratisque tot hostium exercitibus omnes Italiae populos aut vi aut voluntate in deditionem accepissent, ii verso⁽³⁾ Marte Africae populationes et obsidionem Carthaginis visuri forent : nequaquam autem pari ad ea patienda robore esse Carthaginienses atque Romani fuissent.

(25)

(¹) Hippo Regius, a port in Northern Africa.

(²) *mutare*, used intransitively.

(³) *verti* = turn, change.

LATIN

HIGHER GRADE—(SECOND PAPER)

Friday, 23rd March—1.30 P.M. to 3.30 P.M.

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

N.B.—Begin each question on a fresh page.
Write legibly and neatly, and leave a reasonable space between the lines.
Marks will be deducted for bad writing.

1. Translate into Latin prose :—

On receiving this information, Darius determined to find out whether the Greeks meant to make war or to surrender. He accordingly sent messengers to the different parts of Greece and ordered them to demand earth and water for the King. At the same time he sent envoys to his own cities, to collect as many men of war as they could and to have vessels built for the transport of his cavalry. In the midst of these preparations the messengers who had been sent to Greece came back with the news that many of those who lived on the mainland⁽¹⁾ and all those who lived in the islands had given what had been demanded. Now when the Athenians heard of the behaviour of the islanders⁽²⁾ they were afraid they might invade their country with Darius and were very angry with them for proving traitors to Greece. They therefore sent ambassadors to Sparta to complain about the islanders and to secure help from the two Spartan Kings. One of these at once proceeded against the Aeginetans, with the object of punishing them for their treachery ; but the Aeginetans opposed him, and he had to return home without effecting his purpose. (35)

(¹) continens.

(²) insulares.

2. Translate into Latin :—

- (1) I hope that the enemy will soon be defeated and that our men will return home in safety.
- (2) It is impossible to discover whether his statement is true or false.
- (3) I will write you a letter, if you tell me when you intend to be at Rome.

- (4) He said that no one had fought more bravely at Philippi than Sulpicius.
- (5) Nothing will prevent our soldiers from going to the help of the allies.
- (6) The King promised to give a large reward to the man who was first to cross the river.
- (7) The general was afraid that his men would not be able to return before nightfall.
- (8) The faster you pitch the camp, the sooner we shall be able to sleep. (25)

GREEK

LOWER GRADE

Monday, 26th March—10 A.M. to 12.30 P.M.

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

N.B.—Begin each question on a fresh page. Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

1. Translate into English :—

The March of Agesilaus through Mysia.

ἐπειδὴ δὲ προῖὼν ἐγένετο κατὰ μέσσην μάλιστα τὴν Μυσίαν, ὀρῶν χαλεπὴν καὶ στενὴν⁽¹⁾ οὖσαν τὴν δίοδον καὶ βουλόμενος ἀσφαλῶς πορευθῆναι δι' αὐτῆς, πέμψας τινα πρὸς τοὺς Μυσοὺς καὶ σπεισάμενος⁽²⁾ πρὸς αὐτοὺς ἤγε τὸ στράτευμα διὰ τῆς χώρας. οἱ δὲ Μυσοί, παρέντες⁽³⁾ πολλοὺς τῶν Πελοποννησίων καὶ τῶν συμμάχων, ἐπιθέμενοι τοῖς τελευταίοις αὐτῶν καταβάλλουσί τινας τῶν στρατιωτῶν ἀτάκτων διὰ τὰς στενοχωρίας οὐτων. Ἀγησίλαος δὲ καταζεύξας⁽⁴⁾ τὸ στράτευμα ταύτην τὴν ἡμέραν ἤσυχίαν ἤγε ποιῶν τὰ νομιζόμενα τοῖς ἀποθανούσι· διεφθάρησαν δὲ περὶ πεντήκοντα· εἰς δὲ τὴν ἐπιούσαν ἡμέραν καθίσας εἰς ἐνέδραν⁽⁵⁾ πολλοὺς τῶν μισθοφόρων, ἀναστὰς⁽⁶⁾ προῆγε τὸ στράτευμα πάλιν. οἱ δὲ Μυσοί, οἰηθέντες διὰ τὴν πληγὴν⁽⁷⁾ τὴν τῇ προτεραίᾳ γενομένην ἀπιέναι τὸν Ἀγησίλαον, ἐξελθόντες ἐκ τῶν κωμῶν ἐδίωκον, ὡς ἐπιθησόμενοι τοῖς τελευταίοις τὸν αὐτὸν τρόπον. οἱ δὲ τῶν Ἑλλήνων ἐνεδρεύοντες, ὡς ἦσαν κατ' αὐτούς, ἐκπληθήσαντες ἐκ τῆς ἐνέδρας τοῖς πολεμίοις προσέβαλον. (25)

(1) στενός = narrow.

(2) from σπένδομαι = make a treaty.

(3) from παρίημι = let past.

(4) from καταζεύγνυμι = bring into camp.

(5) ambush.

(6) set out, start.

(7) reverse.

2. Translate into English :—

Alexander the Great and Hannibal have a dispute in Hades as to who should have precedence. Minos is the Judge of the Underworld.

ΑΛΕΞ. Ἐμὲ δεῖ προκεκρίσθαι⁽¹⁾ σου, ὦ Δίβν· ἀμείνων γάρ εἰμι.

ΑΝ. Οὐ μὲν οὖν, ἀλλ' ἐμέ.

ΑΛΕΞ. Οὐκοῦν ὁ Μίνως δικασάτω.

ΜΙΝ. Τίνες δὲ ἐστέ ;

ΑΛΕΞ. Οὗτος μὲν Ἀννίβας, ἐγὼ δὲ Ἀλέξανδρος.

ΜΙΝ. Νῆ Δία ἔνδοξοί γε ἀμφότεροι. ἀλλὰ περὶ τίνος ὑμῖν ἦ ἔρις ;

ΑΛΕΞ. Περὶ προεδρίας.⁽²⁾ φησὶ γὰρ οὗτος ἀμείνων γεγενῆσθαι στρατηγὸς ἐμοῦ, ἐγὼ δέ, ὥσπερ ἅπαντες ἴσασι, οὐχὶ τούτου μόνου ἀλλὰ πάντων σχεδὸν τῶν πρὸ ἐμοῦ φημὶ διενεγκεῖν⁽³⁾ τὰ πολέμια.

ΜΙΝ. Οὐκοῦν ἐν μέρει ἐκάτερος εἰπάτω, σὺ δὲ πρῶτος, ὦ Δίβν, λέγε.

ΑΝ. ἔγωγ' οὖν μέχρι τῶν προαστείων⁽⁴⁾ τῆς προύχουσης πόλεως τῆς Ἰταλίας ἦλθον καὶ τοὺς Ῥωμαίους νικήσας τοσοῦτους ἀπέκτεινα μιᾶς ἡμέρας ὥστε τοὺς ποταμοὺς γεφυρῶσαι νεκροῖς.

ΜΙΝ. Ὁ μὲν εὖ εἴρηκεν. σὺ δέ, ὦ Ἀλέξανδρε, τί πρὸς ταῦτα φῆς ;

ΑΛΕΞ. Ἐχρῆν μὲν μηδὲν πρὸς ἄνδρα οὕτω θρασὺν ἀποκρίνασθαι· ἱκανὴ γὰρ ἡ φήμη διδάξει σε, οἷος μὲν ἐγὼ βασιλεύς, οἷος δὲ οὗτος ληστής⁽⁵⁾ ἐγένετο. ὁμως δὲ ὄρα εἰ κατ' ὀλίγον αὐτοῦ διήνεγκα.

(25)

(1) to be preferred, to have precedence. (2) precedence.

(3) excl. (4) suburbs. (5) robber, brigand.

3. Translate into Greek :—

- (1) I know that the general has arrived.
- (2) The sailors captured all the enemies' ships.
- (3) I am afraid someone will steal my horse.
- (4) We should never deceive those who trust us.
- (5) He has come to find out what we are doing.
- (6) The poor are sometimes happier than the rich.
- (7) Tell us the truth before you go away.
- (8) Any one who does that will be put to death.

(9) If I had seen you yesterday I should not have written.

(10) Fighting is better than staying at home. (20)

4.—(a) Give the Greek words (with meanings) from which the following are derived:—

autonomy, eclipse, parallel, euphemism, bishop, hyperbole. (6)

(b) Translate into English:—

(1) ταῦτ' ἐπὶ τῶν πατέρων ἐγένετο.

(2) οὐδὲν οὐκ ἐποίησαν.

(3) οὐκ ἐχρῆν λέγειν, ἐξὸν σιγᾶν.

(4) ἤσθοντο πρῶτοι ἀφικόμενοι. (4)

GREEK

HIGHER GRADE—(FIRST PAPER)

Monday, 26th March—10 A.M. to 12 NOON

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

N.B.—Begin each question on a fresh page. Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

Translate into English:—

1. *How a prince killed Gobryas's only son in a fit of jealousy at being surpassed in skill as a huntsman. Gobryas is speaking.*

ἄπαις δ' εἰμὶ ἀρρένων παίδων. ὃς γὰρ ἦν μοι μόνος καὶ καλὸς κάγαθός, τοῦτον ὁ τότε βασιλεὺς ἐκάλεσε ὡς δώσων τὴν θυγατέρα αὐτῷ, ἐγὼ δ' ἀπεπεμψάμην αὐτὸν μέγα φρονῶν ὅτι δῆθεν τῆς βασιλέως θυγατρὸς ὀψοίμην τὸν ἐμὸν υἱὸν γαμέτην. ὁ δὲ νῦν βασιλεὺς εἰς θήραν αὐτὸν παρακαλέσας ἀνῆκεν⁽¹⁾ αὐτῷ θηρᾶν ἀνὰ κράτος, ὡς πολὺ κρείττων αὐτοῦ ἵππεὺς ἡγούμενος εἶναι. ὁ μὲν οὖν ὡς φίλῳ συνεθήρα, φανείσης δ' ἄρκτου διώκοντες ἀμφότεροι, ἐκείνος μὲν ἀκοντίσας ἤμαρτεν, ὁ δ' ἐμὸς παῖς βαλὼν καταβάλλει τὴν ἄρκτον. καὶ τότε μὲν δὴ ἀχθόμενος ἄρ' οὔτος κατέσχε τὸν φθόνον. ὕστερον δὲ λέοντος παρατυχόντος ὁ μὲν αὖ ἤμαρτεν, οὐδὲν οἶμαι θαυμαστὸν παθῶν, ὁ δ' αὖ ἐμὸς παῖς αὖθις τυχὼν κατειργάσατο⁽²⁾ τὸν λέοντα. ἐν τούτῳ δὴ οὐκέτι κατίσχει ὁ ἀνόσιος τὸν φθόνον, ἀλλ' αἰχμὴν παρὰ τινος τῶν ἐπομένων ἀρπάσας, παίσας εἰς τὰ στέρνα τὸν μόνον μοι καὶ φίλον παῖδα ἀφείλετο τὴν ψυχὴν. (35)

(1) gave him leave.

(2) despatched.

2.

Filial piety rewarded.

λέγεται οὖν ἐν Σικελία (εἰ γὰρ καὶ μυθωδέστερόν ἐστιν, ἀλλ' ἀρμόσει⁽¹⁾ καὶ ὑμῖν ἅπασιν τοῖς νεωτέροις ἀκοῦσαι) ἐκ τῆς Αἴτνης ρύακα πυρὸς⁽²⁾ γενέσθαι· τοῦτον δὲ ρεῖν φασὶν ἐπὶ πᾶσαν τὴν χώραν. τοὺς μὲν οὖν ἄλλους ὀρμῆσαι πρὸς φυγὴν, τὴν αὐτῶν σωτηρίαν ζητοῦντας, ἓνα δὲ τινα τῶν νεωτέρων, ὀρῶντα τὸν πατέρα πρεσβύτερον ὄντα καὶ οὐχὶ δυνάμενον ἀποχωρεῖν ἀλλὰ ἐγκαταλαμβανόμενον, ἀράμενον φέρειν. φορτίου⁽³⁾ δ' οἶμαι προσγενομένου καὶ αὐτὸς ἐγκατελήφθη. ἐν δὲ τούτῳ δῆλόν ἐστι τὸ θεῖον τοῖς ἀνδράσι τοῖς ἀγαθοῖς εὐμενῶς ἔχον. λέγεται γὰρ κύκλω τὸν τόπον ἐκείνον περιβρέϋσαι τὸ πῦρ καὶ σωθῆναι τούτους μόνους, ἀφ' ὧν καὶ τὸ χωρίον ἔτι καὶ νῦν προσαγορεύεσθαι τῶν εὐσεβῶν χώρον· τοὺς δὲ ταχίστην τὴν ἀποχώρησιν ποιησαμένους καὶ τοὺς ἑαυτῶν γονεῖς ἐγκαταλιπόντας πάντας ἀπολέσθαι.

(30)

(1) it will be fit. (2) ρύαξ πυρός = stream of lava. (3) burden.

3. Either (a) or (b)—

(a) *Iris delivers to Priam a message from Zeus, bidding him visit Achilles in his hut and ransom the body of Hector.*

Στῆ δὲ παρὰ Πρίαμον Διὸς ἄγγελος, ἠδὲ προσηύδα τυτθὸν⁽¹⁾ φθεγξαμένη· τὸν δὲ τρόμος ἔλλαβε γυῖα·

“θάρσει, Δαρδανίδη Πρίαμε, φρεσί, μηδέ τι τάρβει· οὐ μὲν γάρ τοι ἐγὼ κακὸν ὀσοσμένη⁽²⁾ τόδ' ἰκάνω, ἀλλ' ἀγαθὰ φρονέουσα· Διὸς δὲ τοι ἄγγελός εἰμι, ὅς σευ ἀνευθεν⁽³⁾ ἐὼν μέγα κήδεται ἠδ' ἐλεαίρει. λύσασθαι σ' ἐκέλευσεν Ὀλύμπιος Ἔκτορα δῖον, δῶρα δ' Ἀχιλλῆϊ φερέμεν, τά κε θυμὸν ἰήνη,⁽⁴⁾ οἶον, μηδέ τις ἄλλος ἅμα Τρώων ἴτω ἀνήρ. κῆρύξ τίς τοι ἔποιτο γεραίτερος, ὅς κ' ἰθύνοι ἡμίονους καὶ ἅμαξαν ἐὔτροχον, ἠδὲ καὶ αἴτις νεκρὸν ἄγοι προτὶ ἄστν, τὸν ἔκτανε δῖος Ἀχιλλεύς. μηδέ τί τοι θάνατος μελέτω φρεσὶ μηδέ τι τάρβος· τοῖος γάρ τοι πομπὸς ἅμ' ἔψεται Ἀργειφόντης, ὅς σ' ἄξει ἠός⁽⁵⁾ κεν ἄγων Ἀχιλλῆϊ πελάσση. αὐτὰρ ἐπὴν ἀγάγησιν ἔσω κλισίην Ἀχιλλῆος, οὐτ' αὐτὸς κτενέει ἀπὸ τ' ἄλλους πάντας ἐρύξει.”⁽⁶⁾

(30)

(1) softly. (2) foreboding. (3) far away. (4) from *iaínw* = gladden.

(5) = ἔως.

(6) from *ἐρύκω* = restrain, ward off.

(b) *Ajax, recovering from the fit of destructive madness with which the Gods afflicted him after the contest for the arms of Achilles, broods upon his disgrace.*

καὶ νῦν τί χρῆ δρᾶν; ὅστις ἐμφανῶς θεοῖς
 ἐχθαίρομαι, μισεῖ δὲ μ' Ἑλλήνων στρατός,
 ἔχθει δὲ Τροία πᾶσα καὶ πεδία τάδε.
 πότερα πρὸς οἴκους, ναυλόχους λιπῶν ἔδρας
 μόνους τ' Ἀτρείδας, πέλαγος Αἰγαίου περῶ;
 καὶ ποῖον ὄμμα πατρὶ δηλώσω φανεῖς
 Τελαμῶνι; πῶς με τλήσεται ποτ' εἰσιδεῖν
 γυμνὸν φανέντα τῶν ἀριστείων⁽¹⁾ ἄτερ;
 οὐκ ἔστι τοῦργον τλητόν. ἀλλὰ δῆτ' ἰὼν
 πρὸς ἔρυμα Τρώων, ξυμπεσῶν μόνος μόνους
 καὶ δρῶν τι χρηστόν, εἶτα λοίσθιον θάνω;
 ἀλλ' ὦδε γ' Ἀτρείδας ἂν εὐφράναιμί που.
 οὐκ ἔστι ταῦτα. πείρά τις ζητητέα
 τοιάδ', ἀφ' ἧς γέροντι δηλώσω πατρὶ
 μήτοι φύσιν γ' ἄσπλαγχνος⁽²⁾ ἐκ κείνου γεγώς.

(30)

(1) τὰ ἀριστεία = the meed of valour—the arms of Achilles, offered as a prize to the worthiest of the Greeks. The rival claimants were Ajax and Odysseus, and they were awarded to the latter.

(2) ἄσπλαγχος = craven, coward.

GREEK

HIGHER GRADE—(SECOND PAPER)

Monday, 26th March—2 P.M. to 4 P.M.

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

N.B.—Begin each question on a fresh page. Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

Translate into Greek:—

1. Having spoken thus and having sent Artabanos back to Susa, Xerxes next summoned the men of most repute among the Persians, and when they arrived, he spoke to them as follows: "Persians, I bid you show yourselves good men, worthy of the deeds done of old by the Persians, which are great and glorious. Let us one

and all be zealous in our task, as we labour for the common good. I exhort you to persevere in the war, for I am informed that we are marching against brave men, and if we overcome them, there will be no other army which will ever oppose us. Now therefore let us cross the Hellespont, after having made prayer to the gods who guard the Persians.” (35)

2.—(1) We ought not to help the Persians when they are attacking the Greeks.

(2) If this orator had not died he would have rendered great service to his country.

(3) As there are no soldiers guarding the city, we shall capture it with ease.

(4) They all promised to do whatever we ordered.

(5) As soon as you have finished your task, you may go home.

(6) Do not write a letter to any one till you arrive in Greece.

(7) As we were going down to the harbour yesterday we met three sailors. (20)

FRENCH

LOWER GRADE

Thursday, 22nd March—10 A.M. to 12.30 P.M.

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

N.B.—Begin each question on a fresh page.

Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

1. Translate into English :—

Poland two hundred years ago.

La Pologne est un peu plus grande que la France, moins peuplée qu'elle, mais plus que la Suède : ses peuples ne sont chrétiens que depuis environ sept cent cinquante ans. C'est une chose singulière que la langue des Romains, qui n'ont jamais pénétré dans ces climats, ne se parle aujourd'hui communément qu'en Pologne ; tout y parle latin, jusqu'aux domestiques. Ce grand

pays est très fertile ; mais les peuples n'en sont que moins industriels. Les ouvriers et les marchands qu'on voit en Pologne sont des Écossais, des Français, surtout des Juifs ; ils y ont près de trois cents synagogues, et à force de multiplier ils en seront chassés comme ils l'ont été d'Espagne : ils achètent à vil prix les blés, les bestiaux, les denrées⁽¹⁾ du pays, les trafiquent en Allemagne, et vendent chèrement aux nobles de quoi satisfaire l'espèce de luxe qu'ils connaissent et qu'ils aiment. Ainsi ce pays, arrosé des plus belles rivières, riche en pâturages, en mines de sel, et couvert de moissons, reste pauvre malgré son abondance, parce que le peuple est esclave, et que la noblesse est fière et oisive. (25)

(1) *products.*

2. Translate into English :—

Le Cheval du Médecin.

Le cheval était fait à son maître comme le maître au cheval ; il savait que le docteur s'attardait souvent dans ses visites, ne se décidait jamais à s'en aller, et il avait des façons à lui de secouer ses rênes à la porte des malades. D'autres fois, quand c'était l'heure de rentrer pour déjeuner ou pour dîner, il s'arrêtait au milieu de la route, se tournait obstinément du côté de la maison.

— Tiens ! c'est vrai, tu as raison, disait Rivals.

Alors ils revenaient bien vite, ou se disputaient tous les deux.

— Ah ! mais tu m'ennuies, grondait la bonne voix du docteur. A-t-on jamais vu un animal pareil ! Puisque je te dis que j'ai encore une visite à faire, rentre tout seul, si tu veux.

Sur quoi il courait voir son malade, pendant que le cheval, aussi entêté que lui, prenait tranquillement le chemin du village, traînant la voiture allégée, remplie seulement de livres et de journaux, ce qui faisait dire aux paysans qui le rencontraient sur la route :

— Allons ! M. Rivals aura eu encore quelque petite querelle avec sa bête. (25)

3. Translate into French :—

My dear William,

You ask me to tell you how we pass our time here. As the hotel where we are staying is quite near the sea, I get up early when it is fine and bathe before breakfast.

When it is raining, I stay in bed till eight. Last week it rained almost every day, but this morning it was warm and the sun shone.

After coming back to the hotel I dress and have breakfast. Then we play golf⁽¹⁾ or tennis till half-past twelve. To-day we played golf. I played very badly and John beat me for the first time.

In the afternoon we go down to the beach and read the newspapers and after tea we take a long walk. We have just come in. I hope you will come and stay with us soon. (15)

(1) golf = *le golf*.

4. Translate into French :—

(1) Don't tell him that we have arrived.

(2) I am sure he will forget to give you back your pencil.

(3) You must be very tired. Sit down in this arm-chair.

(4) If it is not raining to-morrow morning, we shall waken you at half-past five.

(5) How old are you?—I shall be sixteen next month.

(6) Do you think we should go to the mountain to-day? There are some black clouds in the sky.

(7) Won't you lend my brother your old bicycle if you do not need it? (15)

FRENCH

HIGHER GRADE—(FIRST PAPER)

Thursday, 22nd March—10 A.M. to 12 NOON

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

N.B.—Begin each question on a fresh page. Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

Translate carefully, with due attention to English form and expression :—

1. *The attitude of William of Orange towards the English politicians who were scheming to put him on the throne of England.*

Guillaume était un prince ambitieux ; il est puéril de croire que, jusqu'à l'appel qui lui fut adressé de Londres en 1688, il fût resté étranger au désir de monter sur le trône d'Angleterre, et au travail depuis longtemps entrepris pour l'y porter. Guillaume suivait pas à pas les progrès de ce travail, sans en accepter la complicité, mais sans en repousser le but, sans y encourager, mais en en protégeant les auteurs. Son ambition avait en même temps ce caractère qu'elle s'attachait au triomphe d'une cause grande et juste, la cause de la liberté religieuse et de l'équilibre européen. Jamais homme n'a fait, plus que Guillaume, d'un grand dessein politique, la pensée et le but unique de sa vie. Il avait la passion de l'œuvre qu'il accomplissait, et sa propre grandeur n'était pour lui qu'un moyen. Il ne tenta point de saisir la couronne de l'Angleterre par la violence et le désordre ; il avait l'esprit trop haut et trop bien réglé pour ne pas connaître le vice incurable de tels succès, et pour en accepter le joug. Mais quand cette couronne lui fut offerte par l'Angleterre elle-même, il ne s'arrêta point devant les scrupules de l'homme privé ; il voulait que sa cause triomphât et recueillir l'honneur de son triomphe. (30)

2.

Le Village.

Le village, là-bas sur le bord du coteau,
Sourit dans l'air du soir avec ses maisons blanches,
Et dresse vers les cieux, parmi les hautes branches,
Le clocher d'une église et la tour d'un château.

Transparence du ciel ! Sérénité de l'heure ! . . .
Seule un peu de fumée ondule à l'horizon.
Un mince filet gris sort de chaque maison
Comme pour révéler sa vie intérieure.

Et la cloche du soir s'ébranle dans la tour,
Et son tintement monte à travers la fumée.
Et l'ombre, à pas de loup, descend sous la ramée,
Comme si l'angelus hâtaît la fin du jour.

Et voici que s'éteint la dernière rumeur,
S'efface la fumée et se taisent les cloches.
On pourrait ignorer que les maisons sont proches,
Où l'on vit, où l'on aime, où l'on souffre, où l'on meurt . . .

Et dans la douce paix que chaque nuit ramène,
 Le village, noyé par l'ombre, disparaît.
 Et je vais partir seul, plein du vague regret
 De rester étranger à tant de vie humaine. (20)

3. *Burrhus warns the Emperor Nero not to listen to evil counsellors.*

Burrhus :

C'est à vous à choisir, vous êtes encor maître.
 Vertueux jusqu'ici, vous pouvez toujours l'être :
 Le chemin est tracé, rien ne vous retient plus ;
 Vous n'avez qu'à marcher de vertus en vertus.
 Mais, si de vos flatteurs vous suivez la maxime,
 Il vous faudra, seigneur, courir de crime en crime,
 Soutenir vos rigueurs par d'autres cruautés,
 Et laver dans le sang vos bras ensanglantés.
 Britannicus mourant excitera le zèle
 De ses amis, tout prêts à prendre sa querelle.
 Ces vengeurs trouveront de nouveaux défenseurs,
 Qui même, après leur mort, auront des successeurs :
 Vous allumez un feu qui ne pourra s'éteindre.
 Craint de tout l'univers, il vous faudra tout craindre,
 Toujours punir, toujours trembler dans vos projets,
 Et pour vos ennemis compter tous vos sujets. (15)

FRENCH

HIGHER GRADE—(SECOND PAPER)

Thursday, 22nd March—2.15 P.M. to 4.15 P.M.

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

N.B.—Begin each question on a fresh page.
 Write legibly and neatly, and leave a reasonable space between the lines.
 Marks will be deducted for bad writing.

1. Translate into French :—

“ John,” he said, “ do you know what’s going on at the frontier⁽¹⁾ ?”

“ No, captain,” I answered.

“ Well,” said he, “ France is in danger.”

I did not quite understand what he meant, but it made me very uneasy.

“Perhaps you have never thought about it—you don’t know what your country is,” he said, laying a hand on my shoulder. “It’s everything round about you, those who have fed you and brought you up and taken care of you, everybody you love. These fields you see, these houses and trees, these laughing girls going by yonder—that is your country. The laws that protect you, the bread you earn, the words you use, the joy and sorrow that come to you from the men and things that surround you—they are your country. The little room where you were born, where you used to see your mother, all that reminds you of her, the church near which she is buried—they are your country. It is everywhere: in everything you see, in everything you hear. Think of your rights and duties, your happy memories, all that you are grateful for—imagine all that expressed in one word, and that word will be My Country.”

“I see now,” I cried, “it’s a sort of big family: it’s the bit of the world where God has planted our body and soul.” (40)

(1) la frontière.

2. Translate into French:—

- (1) As soon as they arrive, tell them that I should like to see them at once.
- (2) Why were you afraid to ask them to lend you their car?
- (3) I should have come to see you last night if it had not been so cold.
- (4) Although he is small, he is as strong as his cousin who is much bigger than he.
- (5) After reading the letter he had just received, he rose and left the room without telling me where he was going. (15)

3. Write in French a continuous story based on the following summary, and complete it in your own way. The story should be about one and a half times the length of your answer to Question 1 and should on no account exceed twice that length. Failure to comply with this instruction may lead to a loss of marks:—

A girl of twelve, called Mary, lived with her parents and two brothers in a chalet situated in a valley in the Alps—house three miles from nearest village. In summer she took a little flock of goats to feed on the mountain—

left home at sunrise and returned at sunset. One day on her way back heard a cry of "Help!"—found a traveller who had hurt his foot and could not walk.

(Complete the story in your own way.)

(20)

FRENCH

HIGHER GRADE—(SECOND PAPER)

Thursday, 22nd March—1.30 P.M. to 2 P.M.

This paper must not be seen by any Candidate.

To be read out by the Teacher at 1.30 P.M. in the presence of the Supervising Officer.

To be written by the Candidates on the separate sheets provided, which must be collected before the Second French Paper is distributed.

DIRECTIONS FOR TEACHER.

1. *Read the passage aloud distinctly and deliberately, but not slowly, the object being to bring out the meaning of the whole as clearly as possible. Observe the liaisons as marked.*
2. *Inform the candidates that they may not ask for the repetition of any word or phrase.*
3. *Dictate the passage slowly, repeating each group of words (as indicated by vertical lines) twice over, and pronouncing every word very distinctly. The punctuation should be indicated thus:—(.) 'un point,' (,) 'virgule,' (!) 'point d'exclamation.'*
4. *After an interval of five minutes read the text over again in the same manner as on the first occasion, but do not on any account repeat separate words at the request of individual candidates.*

DICTATION.

L'Amour de la Patrie.

Il est digne de remarque que, | plus le sol d'un pays est ingrat, | plus le climat en est rude, | plus il a de charmes pour nous. | Chose étrange et sublime, | qu'on s'attache par le malheur, | et que l'homme | qui n'a perdu qu'une chaumière | soit celui-là même | qui regrette davantage le toit paternel ! | La raison de ce phénomène, | c'est que la prodigalité | d'une terre trop fertile | détruit, |

en nous enrichissant, | la simplicité des liens naturels | qui se forment de nos besoins. | Tout confirme la vérité de cette remarque. | Un sauvage tient plus à sa cabane | qu'un prince à son palais, | et le montagnard | trouve plus de charme à sa montagne | que l'habitant de la plaine | à son sillon. | Demandez à un berger écossais | s'il voudrait changer son sort | contre celui | du plus grand seigneur de la terre. | Il ne demande que ses troupeaux, | ses torrents, | ses nuages. | Il n'aspire qu'à manger son pain noir, | à boire le lait de ses chèvres, | à chanter dans la vallée | ces ballades | que chantaient aussi ses pères. | Il dépérit | s'il quitte son lieu natal.

(10)

GERMAN

LOWER GRADE

Tuesday, 27th March—10 A.M. to 12.30 P.M.

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

N.B.—Begin each question on a fresh page.

Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing and for failure to use the German script in the answers to Questions 3 and 4.

1. Translate into English :—

A Wanderer's Return.

„Du wirst doch die Nacht bei uns bleiben?“ fragte Brita, als sie im Dorf anlangten. Er trat mit ihr in ihrer Mutter Haus. Es brannte Licht in der Stube, die Frau saß am Spinnrad, und die Kinder hockten⁽¹⁾ am warmen Ofen. Er zog den Rock ab und sah zu, wie Brita die Tücher vom Kopf wickelte. Jetzt erst sollte ihm wieder das liebe Gesicht erscheinen, nach dem er sich so lange gesehnt hatte; aber er erschrak fast, als sie dicht vor ihn trat—es war das liebe, freundliche Gesicht nicht mehr. Er hätte sich einbilden⁽²⁾ können, viele Jahre lang fortgewesen zu sein, so gealtert sah es aus. „Bist du krank gewesen, Brita?“ fragte er bestürzt. Sie schüttelte den Kopf.

Er nahm das goldene Kreuz vor, das er ihr mitgebracht hatte, wickelte es aus dem Papier und reichte es ihr. „Ach—!“ rief sie, offenbar freudig überrascht, und ihr Gesicht erheiterte sich plötzlich. Sie lehnte sich mit dem Ellbogen auf den Tisch, an dem sie ihn

gegenüber gestanden hatte, hielt das Kreuz unter das Licht und beugte sich darüber, es genauer zu betrachten. Die Steine funkelten aus dem Golde vor, und ihre Augen blitzten munter. Aber dann schien wieder eine melancholische Vorstellung⁽³⁾ ihre Gedanken abzulenken.⁽¹⁾ Wie man den Schatten einer Wolke über ein sonniges Getreidefeld ziehen sieht, so verlor sich auch von ihrem Gesicht der Sonnenschein. Sie drückte einen Kuß auf das Kreuz, und als sie sich aufrichtete und abwendete, rollten ihr die hellen Tränen über die Wangen. (30)

(1) hocken = to crouch.

(2) einbilden = to fancy.

(3) Vorstellung = idea.

(4) ablenken = to lead away.

2. Translate into English :—

Die Kinder im Schnee.

Ein Winterabend still und kalt—

Drei Kinder wandern durch den Wald.

Sie gingen schon oft den Weg allein—

Heut flimmert der Mond mit irrem Schein.

Der Pfad, der sonst so kurz nach Haus,—

Heut mündet er nimmer zum Wald hinaus.⁽¹⁾

Die kleinen Beinchen schreiten voran.

Da ragt empor der finstre Taun.⁽²⁾

Sie laufen zurück und hin und her—

Sie finden im Schnee den Weg nicht mehr.

Es weinen die Kleinen, wohl irren sie weit,

Kalt ist die Nacht und Schlafenszeit.

Sieh dort, unter Wurzeln ein trocknes Hohl,⁽³⁾

Da bettet das Schwesterchen beide wohl,

Trägt Moos und Laub zu ihrer Ruh'

Und deckt mit dem eignen Tüchlein sie zu.

Die Nacht ist kalt, vom Mond erhellt,—

Es funkeln die Sterne am Himmelszelt.

Man hat sie gesucht mit Rufen und Schrei'n,

Man hat sie gefunden beim Morgenschein.

Die beiden Kleinen, sie schlafen fest,

Aneinander geschmiegt im warmen Nest.

Den steifen Arm voll Laub und Moos,
 So fand man die andre bewegungslos.
 So lag sie im Schnee—die Wangen rot,
 Die hatte geküßt der eijige Tod. (20)

(1) hinausmünden = to find an exit.

(2) = Waib.

(3) hollow.

3. Translate into German :—

(1) How are you this morning? I hope you slept well.

(2) Waken me, please, at 7.30. I have to go to town early.

(3) He is a Scotsman, though he has been living in London for at least ten years.

(4) When the little girl saw the three chairs, she sat down on the smallest.

(5) I should like to know if you have read the book you bought.

(15)

4. Translate into German :—

Yes, of course I got the invitation. I was sitting at home when the letter was brought. I was to come to-day at 3 o'clock, but I don't like to travel in bad weather. Besides, I'm too old. So I sent a telegram: "Many thanks—sorry—too far." Soon afterwards your kind reply arrived. I am so glad that you allow me to come another day. (15)

GERMAN

HIGHER GRADE—(FIRST PAPER)

Tuesday, 27th March—10 A.M. to 12 NOON

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

N.B.—Begin each question on a fresh page. Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

1. Translate carefully, with due attention to English form and expression :—

A Promising Rascal.

Karl war der jüngste Sohn eines armen, alten Mannes, der unweit dem Städtchen in einer Bauernhütte unter seinem Strohdach vergnügt lebte. In Karls Hause herrschte jederzeit die beste Ordnung und die strengste Arbeitsamkeit. Selbst der Jüngste mußte schon Geld verdienen. Aber der alte Vater hatte an diesem Jüngsten wenig Freude, denn er war ein kleiner, wilder Bube, der tausend tolle Streiche machte, zu denen es jeden Tag Gelegenheit gab. Freilich ward der kleine Laugenichts dafür tapfer gezüchtigt; allein was half's? Die Strafen des Abends waren am Morgen jedesmal richtig verschlafen und vergessen. Dabei fehlte es dem kleinen, quecksilbernen Buben gar nicht an liebenswürdigen Eigenschaften. Er war nicht nur ein schöner Knabe, den die Dichter seiner Zeit, wäre er ihnen als Prinz und nicht im Zwilchfittel⁽¹⁾ und barfuß erschienen, ohne Umstände mit einem Ganymed oder Liebesgott verglichen haben würden, sondern er hatte auch die Gabe, wenn er wollte, sich jedem angenehm zu machen. Der

Schulmeister hielt viel auf ihn; denn keiner seiner Schüler schrieb eine so zierliche Hand, las mit so lebendigem Ausdruck, rechnete so fertig. Der Schulmeister hatte selbst dem Vater einmal gesagt: „Euer Bube sollte nach Lausanne in die hohe Schule; der versteht beinahe schon so viel als ich. Der sollte Pfarrer werden.“

(30)

(1) smock.

2. *The Nightingale's Corner.*

Im fernsten Winkel jenes schönen Parks,
 Wo gern am Nachmittag ich sinnend wandle,
 Weiß eine grüne Wildnis ich. Gar lieblich
 Erscheint sie mir, und auch der Nachtigall
 Gefällt sie wohl. Dort singt und jauchzt und jubelt
 Es rings von jedem Baum. Dort ging ich jüngst
 Bei hellem Abendlicht. Ein seltner Anblick
 Ward plötzlich mir. Dort auf gefälltem Stamm,
 Versteckt im Grünen — abseits war's vom Weg —
 Saß still ein Greis und ruhte sich vom Gang.
 Die achtzig Jahre, die er trug, sie hatten
 Den Nacken ihm gebengt gefärbt mit Silber
 Das schlichte Haar. Er stützte seine Hände
 Gefaltet auf den Stock. Das Ohr geneigt,
 So lauschte er den süßen Melodien
 Und auf dem furchenreichen Antlitz lag es
 Wie leise Wehmut. Er gedachte wohl
 Der schönen Frühlingstage seiner Jugend.
 Vorüber ging ich still. Er sah mich nicht,
 Denn seine Blicke weilten in der Ferne
 Im goldenen Reiche der Erinnerung.

(20)

3. *From a Character Sketch of Ernst Arndt.*

Ernst Arndt war kein Herrscher und Führer, aber er war ein Bild und Ausdruck seines Volkes. Das Wesen dieses Volkes, wie es sich im Schwunge einer großen Kampfeszeit gestellt hatte, war in ihm verkörpert. Wer es wissen will, welche Gedanken damals in den deutschen Bürgern und Bauern arbeiteten, welche Gefühle ihren Herzschlag belebten — wer es wissen will, wie das deutsche Volk in jenen großen Jahren alle niedern Sorgen, alles selbstfüchtige Behagen hinter sich warf und lebensfroh und todesmüthig sein

ganzes Dasein für Vaterland und Recht einsetzte: wer dies mit Augen sehen will, der blicke auf die schlichten, freundlichen und festen Züge dieses Mannes. So wie Arndt während eines langen und wechselvollen Lebens war, so war das deutsche Volk in der leuchtendsten Zeit seiner Geschichte—und wahrlich, auf diese Art der Vertreter seines Volkes genannt zu werden, ist kein kleiner Ruhm. (20)

GERMAN

HIGHER GRADE—(SECOND PAPER)

Tuesday, 27th March—2.15 P.M. to 4.15 P.M.

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

N.B.—Begin each question on a fresh page. Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing and for failure to use the German script throughout.

1. Translate into German:—

The Death of a Favourite Dog.

I should not have related this story if Dandy had been alive. But he is no longer with us. He was old—half-way between fifteen and sixteen: it seemed as though he had waited to see the end of the war, since hardly had we received the news of the armistice⁽¹⁾ when he began to weaken rapidly. Gone deaf and blind, he still insisted on taking several constitutionals every day, and barked⁽²⁾ as usual at the gate; if no one came to let him out or admit him, he opened it for himself as before. This went on till January, 1919, when some of the boys

he knew came back to the house. Then he established himself on his sofa, and we knew that his end was near, for there he would sleep all day and all night, and would eat nothing. Not a groan⁽³⁾ did he ever emit, waking or sleeping; and if you put a hand on him he looked up and wagged his tail⁽⁴⁾ just to show that he was quite happy. And in his sleep he passed away and was buried in the large garden near the second apple tree.

(35)

(1) der Waffenstillstand.

(2) bark = bellen.

(3) der Schmerzenslaut.

(4) to wag the tail = mit dem Schwänze wedeln.

2. Translate into German :—

(1) We should like to buy some English newspapers. Where can they be had?

(2) When can we have luncheon, please? We wish to go on an excursion this afternoon.

(3) If the matter depends on me, you may rely on my help.

(4) I was advised by my friends not to go if I felt unwell.

(5) Mother said we ought to have returned when the rain began.

(10)

3. Write a Free Composition on the subject :—

Der Briefträger kommt.

The story should be about one and a half times the length of your answer to Question 1 and should on no account exceed twice that length. Failure to comply with this instruction may lead to a loss of marks.

You may, if you wish, make use of the following summary :—

Father and mother sitting round fire—thinking of absent son—feeling sad—he has not written for long—mother suggests reasons—a knock at door—the postman—letter from absent one—explains delay in writing—has had a piece of luck—returning home soon—parents' joy.

(25)

GERMAN

HIGHER GRADE—(SECOND PAPER)

Tuesday, 27th March—1.30 P.M. to 2 P.M.

This paper must not be seen by any Candidate.

To be read out by the Teacher at 1.30 P.M. in the presence of the Supervising Officer.

To be written by the Candidates on the separate sheets provided, which must be collected before the Second German Paper is distributed.

DIRECTIONS FOR TEACHER.

1. *Read the passage aloud distinctly and deliberately, but not slowly, the object being to bring out the meaning of the whole as clearly as possible.*
2. *Inform the Candidates that they may not ask for the repetition of any word or phrase, and warn them that marks will be deducted for failure to use the German script.*
3. *Dictate the passage slowly, repeating each group of words (as indicated by vertical lines) twice over, and pronouncing every word very distinctly. The punctuation should be indicated thus—(,) 'Komma', (.) 'Punkt', (;) 'Semifolon'.*
4. *After an interval of five minutes read the text over again in the same manner as on the first occasion, but do not on any account repeat separate words at the request of individual candidates.*

DICTATION.

Caught in a Thunderstorm.

Unter den Bäumen | war es noch ruhig, | aber hoch in den
Kronen | fing schon der Wind an | zu sausen. | Schwarze Wolken |
zogen über den hohen Laubgewölben, | die Äste knarrten, | schreiende
Vögel flatterten | ängstlich durch die Zweige, | der Donner rollte
heran, | eilig, | mit zürnender Stimme | hinter den Wäudern
brein, | welche nun liefen und sprangen, | um wo möglich | vor
dem Regen | unter Dach zu kommen. | Die Aufgabe war nicht
leicht; | denn weit umher | gab es kein Haus. | Einen Augenblick
zweifelten sie, | ob es nicht besser wäre, | im Wald zu bleiben, |
wie dumpf und dunkel | er auch ward. | Aber das Wetter | drohte
zu schwer; | der Forst konnte sie nicht schützen. | So rannten sie
hinaus | und kamen bei der Menbrücke | ins Thal. (10)

GAELIC

LOWER GRADE

Tuesday, 27th March—10 A.M. to 12.30 P.M.

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

**N.B.—Begin each question on a fresh page.
Write legibly and neatly, and leave a reason-
able space between the lines. Marks will be
deducted for bad writing and spelling.**

1. Translate into English :—

Bha Iain eòlach air aisridh chumhaing an fhéidh is na h-earba, is b'e thoileachas-inntinn an fhaghaid a leantuinn le òigridh na tìre. Cha robh bearradh no bealach, no aithghearradh troimh mhonadh, no beul-átha air abhainn, no càrn, no garaidh, air nach robh e mion-eòlach. Ré an t-samhraidh, b'i uamh nan creag a chòmhnuidh: ghluais e o àirigh gu h-àirigh, is cha deachaidh e riamh air falbh falamh o h-aon diubh. Cha bhiodh e gun lòn fhad 's a bhiodh dearc air tom, meas no cnothan an coille; chan fhàilnicheadh a leaba, am feadh 's a gheibheadh e fraoch badanach gorm, a' fàs gu dosrach anns gach àite; agus mar thubhairt e fhéin, bha a chuid tromp soirbh r'an gleusadh. Bha

dhachaidh anns gach àite far an laigheadh a' ghrian air; agus còmhla cha do dhruideadh riamh air. Cha robh mhàileid doirbh r'a giùlan; cha robh innte ach a' chlach-theine agus am fadadh spùinge, sgian dubh a dh' fheanadh nam fiadh, ribe a ghlacadh an fhìrein, agus cromag iarunn a lùbadh nan geug. (20)

2. Translate into English :—

Oran na Samhna.

Air Oidheche na Samhna bidh ann, bidh ann,
 Buidisichean 's deamhna neo-ghann, neo-ghann;
 Bidh sìthchean le aighir a' marcachd 'san athar,
 'S a' toirt leo mnathan is clann, is clann.
 Bidh móran de dhaoine fo sprochd, fo sprochd,
 'S a' chlann bheag ag caoineadh gu goirt, gu goirt;
 Bidh mnathan ag glaothaich, 's cha bhi iad gun aobhar,
 'S na sìthchean 'gan slaodadh do'n chnoc, do'n chnoc.
 Ged bhios logaidean 's bodaich air falbh, air falbh,
 Tha an oidheche sin sona gu dearbh, gu dearbh;
 Gheibh fleasgaichean 's caileagan brath air an leannain,
 Le fàisneachd gun mhearachd, gun chearb, gun chearb.
 Bidh fleasgaichean 's cailean gun tàmh, gun tàmh,
 A' falbh feadh gach baile 'g goid càil, 'g goid càil;
 Cha bhi gàradh no callaid nach leag iad gu talamh,
 'S iad teicheadh leis dhachaidh gun nàir, gun nàir. (20)

3. Translate into Gaelic :—

The life of a St. Kilda fowler is perilous indeed. Sometimes he must make his difficult way along scarcely perceptible ledges, where one false step would involve certain death. But the most inaccessible cliffs are always the most thickly crowded with nests, so these are the goals to be won; the lower cliffs, to which his companions can let him down by strong ropes, are comparatively safe quarters, though dangerous enough. As to the ropes, they are precious property; a good rope is a maiden's dowry, and is the most precious legacy which friend can bequeath to friend. The rope must be about thirty fathoms long, and the best are those made of strong raw cowhide in threefold twist; this is wrapped round with sheepskin to prevent the sharp rocks from cutting it. (20)

4. Write in Gaelic a continuous story, based on the following summary, and complete it in your own way.

The story should be about one and a half times the length of your answer to Question 3 and should on no account exceed twice that length. Failure to comply with this instruction may lead to a loss of marks :—

A Morning Walk.

One morning an Irishman goes out very early in search of game on estate of wealthy gentleman in neighbourhood—turns sharp corner—suddenly meets owner of estate—impossible to avoid him—approaches boldly—inquires of proprietor his reason for being out so early—latter says he is out for a stroll to get an appetite for breakfast—looks at Irishman with suspicion—asks why *he* is out so early—Irishman replies. (20)

GAELIC

HIGHER GRADE—(FIRST PAPER)

Tuesday, 27th March—10 A.M. to 12 NOON

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

N.B.—Begin each question on a fresh page. Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

1. Translate into English :—

Có dhiùbh thachras do neach a bhi sealbhachadh sonais agus sògh an t-saoghail, no tha e an teinn le bochdainn agus trioblaid, tha comhairle dha, no còmh-nadh, a réir fheum, 'sna sean-fhacail. Có dhiùbh is e feabhas inntinn, stiùradh spioradail, no rabhadh saoghalta tha e sireadh, gheibh e sin o sheanairean a bha thall is a chunnaic, 'nuair a labhras iad ris anns na briathran as usa an tuigsinn, as crìonna rabhadh agus teagasg, agus as cuimsiche dh'amaiseas dha air smior na fìrinne. Chan 'eil oisinn de theampull cridhe an duine anns nach 'eil lagh no bagradh freagarrach crochte leò. Is mar is ann o'n chridhe thàinig iad, is ann mar sin as fhearr is aithne dhoibh an cridhe ruighinn, agus, le dìrichead ghuinich saighde, an làrach 's am bi an cron no an coire a

shònrachadh. Bu duilich do luchd-eachdraidh coigreach an dùthchas is an dualchas a chìosnachadh gu buileach an ám bhi ag iomradh air sluagh na Gàidhealtachd. Air an lionadh le mórachd agus greadhnachas gach gnàths deasach, bha da-rìreadh airidh gu leòir, air an dalladh ach gann le measalachd agus fathalachd an dùthcha fhéin, an taice ri suarachas na Gàidhealtachd bochd, chan iongnadh idir ged nach robh iarraidh no sùil aig luchd an àilghis ach airson comharraidhean buirbe is allmharachd; do bhrìgh sin bha iad mar bu trice buain nan àirneagan searbha is a' saltairt nan cìrean meala.

(30)

2. Translate into English :—

Oran Brathan.

“Beil, a chailleach, a' bhrà, is fear a' tighinn 'gad iarraidh.”

“Ciod e an t-aodach a th'air?”

“Lùireach is bàrlag is sean chraicinn brathan,
Is maide brathan air son claidhimh air a leas.”

“Beilidh mi gu dìonganta i, gu dìonganta i, gu dìonganta i.

Chì mi fada bhuan thu,
Mo luaidh ort 's mo rath,
Ag amharc air a bhuar
Ata 'g cluain air an t-srath.

Tha mo luran ort, a ghaoil,
Tha mo chuilein ort, a ghràidh;
Thogadh tu mo smùr dhiom:
Is tu mùirnein nam flath.

Tha sealladh aig mo shùilean
Thog eallach dhiom is dùiseal,
Is tha m'aire nis air sùgradh
Le cùrteir nam flath.

Tha m' fhaireachadh air dùsgadh,
Cha chailleach ach bean ùr mi;
Mo ghean air aiseag lùis dhomh,
Is mo rùn air an t-srath.

Tha m' ulaidh air an fhiùran
Na mullaichean a shiùbhladh;
Tha m' fhuil a' dèanadh ciùil dhomh,
'S mo dhiùlnach 'san t-srath.”

(25)

3. Translate into English :—

Agus is díomhaoinéach an beathadhach beag baoth an damhán allaidh, agus gurab le gliocas 7 le géar-innleacht do-ní sé a ordughadh mas fíor dhó féin, .i. tairngidh sé líon gacha taoibhe dhe féin, 7 do-ní sé sin go daingean do-bhrisde go bhfios dó féin, 7 gabhaidh sé a lán do chuileógaibh beaga gan éifeacht ann, 7 biaidh dóchas mór aige as féin 7 as a líon lán chuileóg; agus ar an bpoinc sin féin tiocfaidh srann gaoithe 7 ní bhia fios cáit a mbí sé féin nó a chuid chuileóg; agus an uair do-gheibh sé ciuine 'na dhiaidh sin, buailidh sé fán inneal chéadna do dhéanamh, 7 tairngidh sé líon as láidire ná an líon roimhe 7 as mó thuillfeas ann, agus biaidh dóchas mór aige as féin ní as mó ná do-bhí aige roimhe; agus an uair shaoilfeas sé féin do bheith comhláidir 7 comhlíonmhor agus bhusmian leis, tiocfaidh srann gaoithe gailbhighe chuige ar a nós chéadna, 7 fuaduibhear é féin 7 brisdear 7 milltear a líon 7 a chuid chuileóg le silleadh na súla.

(20)

7 = agus.

GAELIC

HIGHER GRADE—(SECOND PAPER)

Tuesday, 27th March—2.15 P.M. to 4.15 P.M.

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

N.B.—Begin each question on a fresh page. Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing and spelling.

SECTION I.

All the questions in this Section should be attempted.

1. Write an essay, in Gaelic, on *one* of the following subjects :—

(a) An Geamhradh anns a' Ghàidhealtachd.

(b) Obair latha tòiseachadh.

(30)

2. Turn into idiomatic Gaelic :—

(a) I think little of the folk who depreciate their own country.

- (b) We think it a pity that so many are forced to emigrate owing to lack of work.
- (c) Four of the largest rivers in Scotland are the Spey, the Dee, the Tay, and the Clyde.
- (d) One day, as I was walking in the woods, I saw the nests of two little birds whose eggs had been stolen. (10)

3. Translate into English :—

- (a) Chumadh i rium gruth is uachdar,
Air fhuairid 's gum biodh an t-earrach.
- (b) Is duilich do mhnaoi beanas-tighe
Dhèanamh air na fraighibh fàsa.
- (c) Chan fhuirich muir ri uallach,
Is cha dèan bean luath maorach.
- (d) Tha uaisle fo thuinn an Clann Lachlainn. (10)

SECTION II.

THREE questions should be attempted from this Section.
The answers may be either in Gaelic or in English.

4. Mention any poems you know which deal with hunting and name their authors. Give a short account of one of them. (5)

5. Give a short account of the field customs of the Old Highlands. (5)

6. Write a note on any *one* of the following :—Iain Lom, Alasdair mac Cholla, an Ciaran Mabach, Domhnall á h-Ile. (5)

7. Describe the metres of the following :—

- (a) Tha a h-aodann geal mar a' chaile,
'S a corp sneachdaidh air dheagh dhealbh;
Maoth leanabh le gibhtean saor,
Air nach facas fraoch no fearg.
- (b) Biomaid toilicht' leis na thà,
O nach d'fhaod sinn bhi na's feàrr;
Cha bhi ar cuairt an so ach geàrr,
Is leanaidh sinn an Suaithneas Bàn. (5)

8. What meaning (or meanings) do you attach to any *eight* of the following :—Sonn, fiùran, eireachdail, labhar (adjective), àruinn, iuchair, dallag, caochan, geàrraidh, murlach. (5)

GAELIC

HIGHER GRADE—(SECOND PAPER)

Tuesday, 27th March—1.30 P.M. to 2 P.M.

This paper must not be seen by any Candidate.

To be read out by the Teacher at 1.30 P.M. in the presence of the Supervising Officer.

To be written by the Candidates on the separate sheets provided, which must be collected before the Second Gaelic Paper is distributed.

DIRECTIONS FOR TEACHER.

1. *Read the passage aloud distinctly and deliberately, but not slowly, the object being to bring out the meaning of the whole as clearly as possible.*
2. *Inform the candidates that they may not ask for the repetition of any word or phrase.*
3. *Dictate the passage slowly, repeating each group of words (as indicated by vertical lines) twice over, and pronouncing every word very distinctly. The punctuation should be indicated.*
4. *After an interval of five minutes read the text over again in the same manner as on the first occasion, but do not on any account repeat separate words at the request of individual candidates.*

DICTATION.

Chan 'eil sgoil fo'n ghréin | cho éifeachdach, | ann
 an rathad, | a dh' ionnsachadh foidhidinn, | dìchill, agus
 saothair bhunailteach | cho maith ri bàta an iasgair. |
 Faic e le ràmh no le seòl | a' toirt a mach calaidh | no ag
 cur fodha rudha; | a nis a' buidhinn | is a rìs ag call; | a
 bheatha an crochadh | r'a neart is r'a sheòltachd; |
 agus gheibh thu leasan | air strì bhuan agus dhian | nach
 faigh thu ach ainmig. | Ach an uair a tha an rudha
 seachad, | is an caladh fo shròin, | théid an leasan a
 dhi-chuimhneachadh | gus an toir | féin-fhiosrachadh
 cruaidh a chrannchuir | fa chomhair an iasgair | 's an
 ath ghàbhadh e. | Is e neo-sheasmhachd na gaoithe, | an
 t-srutha is na fairge, | agus neo-chinnteachd a bheatha
 féin | an co-cheangal riu, | a ghleidheas àite | an inntinn
 an iasgair, | agus a ni | "Cum an fhéill air an latha" | 'n
 a éigh* fhaoin 'n a chluais-san. | (10)

* Read *éigh* or *eubh* according to local pronunciation.

SPANISH

LOWER GRADE

Wednesday, 28th March—10 A.M. to 12.30 P.M.

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

N.B.—Begin each question on a fresh page. Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

1. Translate into English :—

El primero que podemos contar entre los reyes de España, por ser muy celebrado en los libros de griegos y latinos, es Gerión, el cual vino de otro país a España, lo que da a entender el nombre de Gerión, que significa extranjero. Este, así que hubo llegado a España, gustó de la tierra y de las riquezas que en ella vió. Enriquecióse con los montes de oro, cuyo uso no era conocido. Además de esto, poseía muchos ganados por la grande comodidad y abundancia de los pastos. Fué el primero que ejercitó la tiranía sobre los naturales, que vivían apartados y derramados por los campos en aldeas, sin tener nadie por gobernador, cuyo imperio reconociesen. Hecho tirano y habiéndose apoderado de todo, edificó un castillo y fortaleza en frente de Cádiz, por nombre Geronda, con cuya ayuda pensaba mantenerse en el imperio que había tomado sobre la tierra.

(20)

2. Translate into English :—

Doña Francisca González de Falcón era una mujer de treinta y cinco años, gruesa, morena, de ojos negros. Su marido, el señor Falcón, era hombre delgado, fino, que estaba casi siempre fuera, pues viajaba mucho por Francia y por España.

Entré en la tienda de la calle de San Francisco y me encontré con doña Paca⁽¹⁾. Me presenté a ella; me hizo sentar y hablamos.

— Conozco al señor Aviraneta ya hace muchos años y somos muy amigos—me dijo—, pero estamos de acuerdo en no hablar el uno del otro, y cuando nos vemos pasamos por desconocidos.

— Es decir, que con usted no hay que hablar de don Eugenio ante la gente.

— Es lo mejor. Aviraneta me ha recomendado a usted. Yo seré la encargada de dirigirle al principio en esta ciudad, de darle los informes necesarios y el dinero para vivir.

— Muy bien. ¿Puedo venir a la tienda con frecuencia?

— Sí; cuando usted quiera.

— Esto será entretenido.

— Ahora, en el verano, menos, porque la gente se marcha. En otoño es otra cosa. Usted puede venir aquí cuando quiera; ¿sabe usted francés?

— Muy poco.

— Pues es conveniente que lo aprenda. Yo conozco a un señor que le dará lecciones muy baratas. Es un profesor; aquí tiene usted sus señas.

Me despedí de doña Paca y fuí a ver al profesor. (24)

(1) Familiar form of Francisca.

3. Translate into Spanish :—

On arriving at the bookseller's shop, I looked in the window, to see if the notice had been removed. To my great delight the paper was still in its place. So I entered, but there was nobody in the shop. As I stood there, considering whether I should call out, a door opened and out came a well-dressed lady of about forty years of age. "What is your business, young man?" she said, after I had bowed to her politely. "I wish to speak to the master," I answered; "I have brought something to show to him. I saw your advertisement for a tale or a novel, and have written something which I think will suit you; and here it is," I added, showing the papers which I held in my hand. (20)

4. Translate into Spanish :—

(1) Spain is situated in the south-west of Europe.

(2) The water is not yet hot. You will have to wait a little longer.

(3) John has just come back from his brother's.

(4) He spends more than he earns.

- (5) Tell him to bring you the money as soon as he can.
- (6) Are you fond of reading?
- (7) It is two years since I saw him.
- (8) I translated the letter from English into Spanish.

(16)

SPANISH

HIGHER GRADE—(FIRST PAPER)

Wednesday, 28th March—10 A.M. to 12 NOON

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

N.B.—Begin each question on a fresh page. Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

Translate, with due attention to English form and expression :—

1. Cuentan que, euando el mariscal Ney se dirigía con sus tropas sobre Pontevedra, venía con ánimo de no dejar en ella piedra sobre piedra. Añaden que al divisarla no pudo menos de exclamar :—¡ Tu belleza me desarma !

Razón tenía; el viajero que entra por cualquiera de los diversos caminos que a ella conducen, no puede menos de sorprenderse ante el espectáculo que se presenta a su vista. Cubierta por un cielo claro y transparente, ceñida por un cinturón de agua, rodeada de eolinas siempre verdes, teniendo por fondo el mar, ¡ buscad, buscad si podéis algo más alegre, más sonriente, que más encante la mirada, que más mueva el espíritu, que más haga olvidar las penas que diariamente asaltan el corazón del hombre ! Con cielo nublado o espléndido, en día sereno o abrumado bajo lluvias torrenciales, la veis siempre hermosa; ya cuando las nieblas que levántandose de las aguas dormidas, se agolpan sobre los breves esteros⁽¹⁾ y ocultan los vecinos montes,—ya euando bajo un sol ardiente brillan las aguas del Lerez, las ondas del mar, los cristales de las viviendas, las hojas y las

flores, siempre frescas y bellas. Puede decirse que no se registra un rincón sin misterio, ni un horizonte sin gratas perspectivas. (30)

(1) creeks.

2. Recoge un Pescador su red tendida,
y saca un pececillo. “ Por tu vida,
Exclamó el inocente prisionero,
Dame la libertad : sólo la quiero,
Mira que no te engaño,
Porque ahora soy ruin; dentro de un año
Sin duda lograrás el gran consuelo
De pescarme más grande que mi abuelo.
¡ Qué ! ¿ te burlas ? ¿ te ríes de mi llanto ?
Sólo por otro tanto
A un hermanito mío
Un señor pescador lo tiró al río.”
“ ¿ Por otro tanto al río ? ¿ qué manía ! ”
Replicó el Pescador ; “ ¿ pues no sabía
Que el refrán castellano
Dice : *más vale pájaro en la mano . . . ?* ”

(15)

3. Doña Leonor, Doña Rosa, Juliana; *las tres salen con mantilla y basquiña de casa de Don Gregorio y hablan inmediatas a la puerta.* Don Gregorio, Don Manuel.

Doña Leonor.—No te dé cuidado. Si te riñe, yo me encargo de responderle.

Juliana.—¡ Siempre metida en un cuarto, sin ver la calle ni poder hablar con persona humana ! ¿ Qué fastidio !

Doña Leonor.—Mucha lástima tengo de tí.

Doña Rosa.—Milagro es que no me haya dejado debajo de llave, o me haya llevado consigo, que aun es peor.

Juliana.—Le echaría yo más alto que . . .

D. Gregorio.—¡ Oiga ! ¿ Y adónde van ustedes, niñas ?

Doña Leonor.—La he dicho a Rosita que se venga conmigo para que se esparza un poco. D. Manuel nos hará el gusto de acompañarnos . . .

D. Manuel.—Sí, por cierto, vamos allá.

Doña Leonor.—Y, mire usted, yo me quedo a merendar en casa de Doña Beatriz . . . Me ha dicho

tantas veces que porqué no llevo a ésta por allá, que ya no sé que decirle; con que, si usted quiere, irá conmigo esta tarde: merendaremos, nos divertiremos un rato por el jardín, y al anochecer estamos de vuelta.

D. Gregorio.—Usted (*a Doña Leonor, a Juliana, a D. Manuel y a Doña Rosa, según lo indica el diálogo*) puede irse adonde guste: usted puede ir con ella . . . Tal para cual. Usted puede acompañarlas, si lo tiene a bien; y usted a casa.

D. Manuel.—Pero, hermano, déjalas que se diviertan, y que . . .

D. Gregorio.—A más ver (*coge del brazo a Doña Rosa, haciendo ademán de entrarse con ella en su casa*).

(20)

SPANISH

HIGHER GRADE—(SECOND PAPER)

Wednesday, 28th March—2.15 P.M. to 4.15 P.M.

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

N.B.—Begin each question on a fresh page. Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

1. Translate into Spanish:—

A few days after our return from Soller we drove to Miramar, intending to make a tour thence on horse-back through the less accessible parts of the island. Miramar is a small estate on the north-west coast of Majorca, belonging to an Austrian prince, who has built a house on it and has written a book on the islands, which is said to be interesting.

Miramar lies at a distance of only two hours from Palma; and the latter part of the drive is extremely pretty, for the hills are wooded, and the steep road which runs through the picturesque village of Valldemosa commands a fine view of the rocks beneath. When we reach the summit of the long ascent the sea becomes visible, and the road, which is now flat, runs along fields of wheat and beans until Miramar is reached. Here the

Prince keeps an inn in order to accommodate travellers with beds and attendance free of charge. An old woman and her daughter—the bride of a sailor who, immediately after their marriage, had received orders to join his ship—are in charge of the inn and also of the Prince's house. (35)

2. Translate into Spanish :—

- (1) Yesterday it was cold and windy, but to-day it is fine and sunny.
- (2) I heard the young lady in the next house playing the piano.
- (3) One cannot help liking him, he is so kind to everybody.
- (4) I should be greatly obliged if you would let me know in good time.
- (5) You ought to have prepared yourself sooner for the examination. (15)

3. Write in Spanish a continuous story based on the following summary. The story should be about one and a half times the length of your answer to Question 1 and should on no account exceed twice that length. Failure to comply with this instruction may lead to a loss of marks :—

Famous poet—shabbily dressed—returning home—needed writing-paper—went into shop—selected paper and other articles—payment—felt in pockets—no money left—said to shopkeeper—no money—pay next time—K. the poet—works known to everybody—answer of shopkeeper—know neither poet nor works—many people in city with same name—credit not given to strangers—bring money can have goods. (25)

SPANISH

HIGHER GRADE—(SECOND PAPER)

Wednesday, 28th March—1.30 P.M. to 2 P.M.

This Paper must not be seen by any Candidate.

To be read out by the Teacher at 1.30 P.M. in the presence of the Supervising Officer.

To be written by the Candidates on the separate sheets provided, which must be collected before the Second Spanish Paper is distributed.

DIRECTIONS FOR TEACHER.

1. *Read the passage aloud distinctly and deliberately, but not slowly, the object being to bring out the meaning of the whole as clearly as possible.*
2. *Inform the candidates that they may not ask for the repetition of any word or phrase.*
3. *Dictate the passage slowly, repeating each group of words (as indicated by vertical lines) twice over, and pronouncing every word very distinctly. The punctuation should be indicated thus :—(.) ‘ punto,’ (,) ‘ coma,’ (;) ‘ punto y coma,’ (:) ‘ dos puntos.’*
4. *After an interval of five minutes read the text over again in the same manner as on the first occasion, but do not on any account repeat separate words at the request of individual candidates.*

DICTATION.

Bajando por la pendiente de la montaña, | desde donde se descubre la marina, | ofrece Málaga un aspecto encantador : | el mar, que se pierde en el horizonte, | ondulado por sus olas bañadas de luz ; | el mar, cruzado por barcas de pescadores | que, con las velas latinas, | parecen, más que barcas, blanquísimas gaviotas. |

Allí, en la embocadura del puerto, | a la izquierda, | se levanta la farola | como gigante centinela ; | al otro lado la batería erizada de cañones. | Pueblan la rada mástiles y banderas | representando todas las naciones del mundo. | Allí se siente la vida, | porque todo está animado de movimiento : | los buques que se balancean | al dulce vaivén de las olas ; | la luz, cabrilleando en las ondulaciones del mar ; | las velas, las aves, las nubes, las barcas, | nos dicen que son seres animados. |

(10)

MATHEMATICS

LOWER GRADE—(FIRST PAPER)

Tuesday, 20th March—10 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.

All the figures should be neatly drawn. All the steps of the proofs must be given. Preference will be given to proofs which depend on first principles, and in all cases it should be clearly shown on what assumptions the demonstrations are based.

The value attached to each question is shown in brackets after the question. Marks will be deducted for careless or badly arranged work.

SECTION I.

All the questions in this Section should be attempted.

1. Prove that two right-angled triangles are congruent if their hypotenuses are equal and a second side of one is equal to a second side of the other. (12)
2. Prove that the sum of the squares on two sides of a triangle is equal to twice the square on half the base, together with twice the square on the median. (12)
3. State and prove the construction for inscribing a circle in a given triangle. (11)
4. Find a mean proportional between two given straight lines. Prove your construction. (11)

SECTION II.

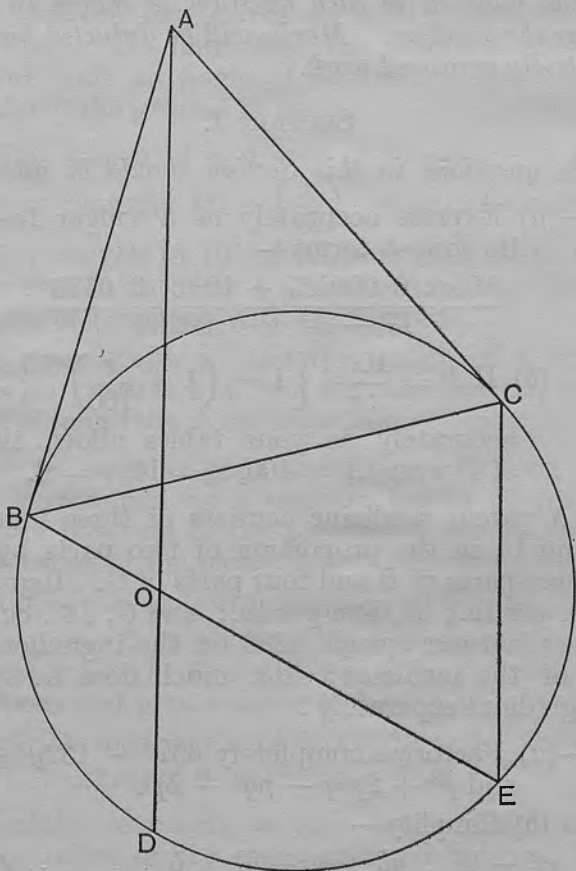
Only THREE questions should be attempted from this Section. The propositions in Section I. (above) on which certain of these deductions depend are indicated in brackets.

5. The base AB of a triangle ABC is given in magnitude and position, and also the sum of the squares on the sides in magnitude. Prove that the locus of the vertex C is a circle. (Section I., 2.) (18)
6. Given the sum of two straight lines and the mean proportional between them, state and prove a construction for finding the lengths of the straight lines. (Section I., 4.) (18)
7. D is the foot of the perpendicular from the vertex C of a triangle ABC on the bisector AD of the angle CAB . DE is drawn parallel to BA and meets AC in the point E . Prove that E is the mid-point of AC . (18)

8. Two circles intersect in the points P and Q . C , the centre of one of them, is joined to P and Q , and the straight lines CP , CQ (produced if necessary) intersect the other circle in R and S respectively. Prove that PR is equal to QS . (18)

9. (See figure, which need not be copied in your examination book.)

B and C are the points of contact of the tangents from A to the circle BCE . AD is parallel to the chord CE , and cuts the chord BE in the point O . Prove that the angles ABC , ACB , AOB , and CEB are equal. Prove also that if the straight line CO is drawn, AO will be the bisector of the angle BOC . (18)



MATHEMATICS

LOWER GRADE—(SECOND PAPER)

Tuesday, 20th March—1 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.

Square-ruled paper and four-place logarithmic tables are provided.

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

The value attached to each question is shown in brackets after the question. Marks will be deducted for careless or badly arranged work.

SECTION I.

All the questions in this Section should be attempted.

- 1.—(a) Express accurately as a vulgar fraction in its lowest terms—

$$\frac{10^4 \times 0.000157 + 10^2 \times 0.0175}{17 - 10^3 \times 0.00289}$$

- (b) If $P = \frac{100A}{r} \left\{ 1 - \left(1 + \frac{r}{100} \right)^{-n} \right\}$, find, as

accurately as your tables allow, the value of P when $A = 400$, $n = 10$, $r = 6$. (10)

2. A patent medicine consists of three ingredients, A , B and C , in the proportion of two parts by weight of A , three parts of B and four parts of C . Ingredient A costs 7s. per lb.; B , 14s. per lb.; and C , 18s. 8d. per lb. The manufacturer spends £280 on the ingredients for a supply of the medicine: how much does he spend on each ingredient separately? (15)

- 3.—(a) Factorize completely $65x^2 - 132y^2 + 101xy$ and $p^3 + 2p^2q - pq^2 - 2q^3$.

(b) Simplify—

$$\frac{(a+c)^2 - b^2}{(a+b)^2 - c^2} \div \frac{ab+bc-b^2}{a^2+ab-ac} - \frac{b}{a} + (a+b) \left(\frac{1}{a} - \frac{1}{b} \right).$$

(15)

4.—(a) Solve the equations :—

$$(i) \frac{x+1}{y-2} = \frac{2}{3}, \quad \frac{x-1}{y+2} = \frac{4}{7}.$$

$$(ii) \frac{x}{x-2} + \frac{x-2}{x} = 3\frac{1}{3}.$$

(b) The equation $x^2 - 4ax + (a+3)^2 - 10 = 0$ is satisfied by $x = 3$: find the possible values of a . (15)

SECTION II.

Only THREE questions should be attempted from this Section.

5. A man in an aeroplane is directly over a point midway between two marks on level ground which are a mile apart. He finds that the distance between the marks subtends an angle of 54° at his eye. Find his height above the ground in feet. (15)

6. The length of a degree of longitude in latitude x° is approximately $69 - \left(\frac{x}{10}\right)^2$ miles. Calculate this length at intervals of 10° of latitude from 0° to 60° and use your results to draw a graph connecting the length of a degree of longitude with the latitude.

Use your graph to find the length of a degree of longitude in latitude $51\frac{1}{2}^\circ$ and also the latitude in which a degree of longitude is 50 miles long. (15)

7. A rectangular plot, three times as long as it is wide, is surrounded by a uniform border $5\frac{1}{2}$ feet wide. The area of plot and border together is 793 sq. ft. Find the dimensions of the plot. (15)

8. When you find the mantissa of the logarithm of a given number from your tables, how do you determine the characteristic? Describe the rule you employ for this purpose and give reasons to justify it.

Find the logarithms of 0.003572 and 3572000 , and the antilogarithms of 6.4832 and $\bar{4}.4832$.

Calculate, as nearly as your tables allow, the area in square inches of the space enclosed between the circumferences of two concentric circles of radii $4.68''$ and $2.74''$. ($\pi = 3.142$). (15)

- 9.—(a) If $x : y = 7 : 12$, find the ratio of $8x - 3y$ to $5x - 2y$.
- (b) A sum of $\text{£}x$ is divided between two persons, A and B , so that their shares are in the ratio of $a : b$.
- (i) How much money does each receive ?
- (ii) What is the ratio of A 's share to the whole sum ?
- (iii) If A spend a quarter of his share and B one-third of his, what will be the ratio of the amounts they now have ? (15)

MATHEMATICS

HIGHER GRADE—(FIRST PAPER)

Tuesday, 20th March—10 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.

All the figures should be neatly drawn. All the steps of the proofs must be given. Preference will be given to proofs which depend on first principles, and in all cases it should be clearly shown on what assumptions the demonstrations are based.

The value attached to each question is shown in brackets after the question. Marks will be deducted for careless or badly arranged work.

SECTION I.

All the questions in this Section should be attempted.

1. Show how, in a given circle, to inscribe a triangle equiangular to a given triangle, proving the construction. (11)

2. From the vertical angle of a triangle a straight line is drawn perpendicular to the base. Prove that the rectangle contained by the sides of the triangle is equal to the rectangle contained by the perpendicular and the diameter of the circle described about the triangle. (12)

3. Give the construction for drawing a straight line perpendicular to a given plane from a given point (*a*) when the point is not in the plane, (*b*) when the point is in the plane. Proofs are not required. (12)

4. The angles A , B and $A + B$ being all positive and acute, prove that

$$\cos(A + B) = \cos A \cos B - \sin A \sin B. \quad (11)$$

SECTION II.

Only THREE questions should be attempted from this Section. The propositions in Section I. (above) on which certain of these deductions depend are indicated in brackets.

5. Tangents are drawn to the circle circumscribing a triangle ABC at the vertices A , B , C , forming a triangle PQR , P being opposite to A and Q opposite to B . Prove that if the angle RPQ is twice the angle CAB , the triangle PQR is right-angled.

If the triangle ABC is right-angled, show that there is no triangle PQR . (Section I., 1.) (18)

6. $ABCD$ is a quadrilateral inscribed in a circle and P is any other point on the circumference. If p and p' are the lengths of the perpendiculars from P on AB and CD respectively, and q and q' the lengths of the perpendiculars from P on BC , DA respectively (the sides being produced if necessary), prove that $pp' = qq'$. (Section I., 2.) (18)

7. Find the locus of the points in space which are equidistant from two given points and also the locus of the points which are equidistant from three given points which are not in the same straight line. (18)

8. A circle is circumscribed to a triangle ABC , and I is the centre of the circle inscribed in the triangle. AI produced meets the circumference of the circumscribed circle at Q . Prove that QI , QB , and QC are all equal. (18)

9. A flagstaff, a feet high, stands on top of a pillar b feet high, where $a > b$. At a point at the same level as the foot of the pillar and distant x feet from it, the pillar and the flagstaff subtend equal angles. Prove that

$$x^2 = b^2 \frac{a + b}{a - b}. \quad (18)$$

MATHEMATICS

HIGHER GRADE—(SECOND PAPER)

Tuesday, 20th March—1 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.

Square-ruled paper and four-place logarithmic tables are provided.

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

The value attached to each question is shown in brackets after the question. Marks will be deducted for careless or badly arranged work.

SECTION I.

All the questions in this Section should be attempted.

1. A coal merchant purchased and re-sold two lots of coal at the prices shown below—

Quantities.	Buying price per ton.	Selling price per ton.
48½ tons	26/3	35/-
14 tons	45/-	42/6

Find: (a) The average price per ton at which he bought the coal.

(b) His net gain on the whole.

(c) His gain per cent. on his whole outlay.

(Answer to be correct to the second decimal place.)

(11)

2. Resolve $4x^2y^2 - (x^2 + y^2 - z^2)^2$ into four factors.

Reduce to its simplest form—

$$\frac{(x + y)^5 - x^5 - y^5}{(x + y)^3 - x^3 - y^3} \quad (10)$$

3. Solve the equations :—

(i) $x - \sqrt{\frac{5}{2}}(x + 1) = 4$, where the square root is understood not to carry a double sign.

(ii) $\frac{x}{a} + \frac{y}{b} = 6$, $\frac{a}{x} + \frac{b}{y} = \frac{2}{3}$. (12)

4. A firm makes the following specification of a certain type of engine :—

Horse-power 5, price £56.

Horse-power 15, price £140.

Plot these on squared paper. Join the points by a straight line and, assuming that this straight line is a correct horse-power price graph, determine the prices of engines of powers 8, 10, 20.

Adapt your figure to show the prices if they were all reduced by 25 %.

(11)

5. The vertical angle A of an isosceles triangle ABC is 36° , and its base BC is 4 inches. Find by means of your tables the length of AC and the vertical height of the triangle.

This height is known to be $2\sqrt{5} + 2\sqrt{5}$ inches. Verify your own result by expressing this surd as a decimal.

(11)

SECTION II.

Only THREE questions should be attempted from this Section.

6. What is meant by saying that y varies as the m th power of x ?

The volume of a sphere is known to vary as the cube of its radius, and the surface as the square of its radius. Four spheres A, B, C, D have respective radii 3, 4, 5, 6 inches. Prove that the surface of C is equal to those of A and B together, and that the volume of D is equal to those of $A, B,$ and C together.

(15)

7. From the formula $A = P \left(1 + \frac{r}{100}\right)^n$, where P is the principal, r is the rate of interest per cent. per annum and n is the number of years, find to what sum

a principal of £375 amounts in 8 years at $4\frac{3}{4}$ per cent per annum.

How long will it take for this principal to double itself at the same rate of interest? (15)

8. In a geometrical progression show that, if each term be subtracted from the succeeding, the successive differences are also in geometrical progression.

If this second progression is 2, 6, 18, etc., show that the n th term of the first progression is 3^{n-1} and find its sum to n terms. (15)

9. Assuming the ordinary formulae for the sine, cosine and tangent of the sum of two angles, obtain formulae for—

$$\begin{aligned} \sin 3A &\text{ in terms of } \sin A, \\ \cos 3A &\text{ in terms of } \cos A, \text{ and} \\ \tan 3A &\text{ in terms of } \tan A. \end{aligned}$$

$$\text{Prove that } \cos 3A = \cos^3 A (1 - 3 \tan^2 A). \quad (15)$$

10. (i) Solve the equation $\tan^2 \theta = 1$, showing that all the values of θ are given by a certain arithmetical progression extending both ways (*i.e.*, positively and negatively).

(ii) Find all values of θ between -180° and $+180^\circ$ which satisfy the equation—

$$5 \cos \theta + 12 \sin \theta = 13. \quad (15)$$

ELEMENTARY ANALYSIS

ADDITIONAL MATHEMATICAL SUBJECT

(Higher Grade)

Wednesday, 21st March—10 A.M. to 12.30 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.

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

Square-ruled paper is provided.

The value attached to each question is shown in brackets after the question. Marks will be deducted for careless or badly arranged work.

SECTION I.

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

1. Express as the sum of three partial fractions—

$$\frac{(q-r)(r-p)(p-q)}{(x-p)(x-q)(x-r)}$$

and, as the sum of two partial fractions with real quadratic denominators—

$$\frac{2x^2}{x^4 + x^2 + 1} \tag{13}$$

2. Find the sum of n terms of the series

$$1.3.5 + 2.4.6 + 3.5.7 + \dots$$

If $u_r \equiv \frac{1}{r(r+1)(r+2)}$ and $v_r \equiv \frac{1}{r(r+1)}$, prove that $u_r = \frac{1}{2}(v_r - v_{r+1})$. Hence show that the sum of n terms of the series $\frac{1}{1.2.3} + \frac{1}{2.3.4} + \frac{1}{3.4.5} + \dots$ is $\frac{1}{4} - \frac{1}{2(n+1)(n+2)}$. (13)

3. Find the number of combinations of n dissimilar things taken r at a time.

In how many ways can $a + b + c$ different books be made up into three parcels, the first containing a , the next b and the next c books? (13)

4. If $t = \tan \frac{A}{2}$, show that $\sin A = \frac{2t}{1+t^2}$, and $\cos A = \frac{1-t^2}{1+t^2}$.

Hence show that

$$a \cos A + b \sin A + c = 0$$

leads to a quadratic equation for t , so giving two values of A between 0° and 360° if $a^2 + b^2 > c^2$. (13)

5. Differentiate

$$(i) xe^x, \quad (ii) (x - 2)^2 (x + 2)^2.$$

Integrate—

$$(i) xe^x, \quad (ii) \cos 3x \sin 2x, \quad (iii) \frac{x - a}{\sqrt{x^2 - 2ax + b}}. \quad (13)$$

SECTION II.

(Not more than THREE questions should be attempted from this Section).

6. Prove that a determinant of the third order vanishes if any two of its columns are identical.

Show that

$$\begin{vmatrix} 1 & 1 & 1 \\ a & b & c \\ a^4 & b^4 & c^4 \end{vmatrix} \div \begin{vmatrix} 1 & 1 & 1 \\ a & b & c \\ a^2 & b^2 & c^2 \end{vmatrix} = a^2 + b^2 + c^2 + bc + ca + ab. \quad (16)$$

7. Sketch the graph of the function $y = \frac{(x - 1)(x - 6)}{(x - 3)(x - 5)}$, showing clearly its relation to the straight lines $x = 3$, $x = 5$ and $y = 1$. Prove that the turning values of the function are given by $x = 9 \pm 2\sqrt{6}$; find the corresponding values of y and, from your sketch or otherwise, determine which of these is a maximum and which a minimum. (16)

8. Write down the series for $\log(1 + x)$ in ascending powers of x . Deduce series for $\log(1 - x)$ and $\log(1 - x^2)$.

Hence prove

$$(i) \log(1 + x) + \log(1 - x) = \log(1 - x^2).$$

$$(ii) \frac{(a + b + ab)^2 - a^2 - b^2}{2} - \frac{(a + b + ab)^3 - a^3 - b^3}{3} + \frac{(a + b + ab)^4 - a^4 - b^4}{4} - \dots = ab.$$

(You may assume that all the series with which you deal are convergent). (16)

9. The first two terms of the expansion of $\frac{a}{(1 - x)^2} + \frac{b}{(2 + 3x)^2}$ are $1 + x$; find the numbers a and b and write down the n th term of the series.

Find also for what values of x the series is convergent. (16)

10. When n is a positive integer, prove the formulæ

$$\begin{aligned} \cos n\theta &= \cos^n\theta \left\{ 1 - \frac{n(n-1)}{2!} \tan^2\theta \right. \\ &\quad \left. + \frac{n(n-1)(n-2)(n-3)}{4!} \tan^4\theta - \dots \right\} \\ \sin n\theta &= \cos^n\theta \left\{ n \tan\theta - \frac{n(n-1)(n-2)}{3!} \tan^3\theta + \dots \right\}. \end{aligned}$$

Write down the last term of each when n is odd.

In particular, write down the expansion of $\cos 8\theta$, and deduce that $\tan^2 \frac{\pi}{16}$ is one root of the equation

$$y^4 - 28y^3 + 70y^2 - 28y + 1 = 0.$$

Find similar expressions for the other roots. (16)

GEOMETRY

ADDITIONAL MATHEMATICAL SUBJECT

(Higher Grade)

Wednesday, 28th March—10 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.

Square-ruled paper is provided.

Marks will be deducted for careless or badly arranged work.

Six questions should be attempted, of which **THREE** at least must be from Section I. and **TWO** at least from Section II. The **SIXTH** question may be taken either from Section I. or from Section II. All the questions are of equal value.

SECTION I.

1. Prove that the general equation of a straight line which passes through the point of intersection of the two straight lines

$$ax + by + c = 0, \quad a'x + b'y + c' = 0$$

is

$$ax + by + c + k(a'x + b'y + c') = 0,$$

where k is any constant.

If A and B are two points on the axis of x whose co-ordinates are $(a, 0)$, $(b, 0)$, and straight lines are drawn through them parallel to $y = mx$, $y = nx$ respectively, find the equation of the straight line joining P , the intersection of these two straight lines through A and B , to the middle point of AB .

Prove also that, if m and n vary so that their ratio remains constant, the locus of P is a straight line, and find its equation.

2. Find the tangent of the angle between the straight lines represented by the equation

$$ax^2 + 2hxy + by^2 = 0.$$

Straight lines are drawn through the point (x_0, y_0) parallel to the straight lines represented by $ax^2 + 2hxy + by^2 = 0$. Prove that the equation of that diagonal of the parallelogram, formed by the four straight lines, which does not pass through the origin is

$$x(ax_0 + hy_0) + y(hx_0 + by_0) = \frac{1}{2}(ax_0^2 + 2hx_0y_0 + by_0^2).$$

3. Prove that the equation of the chord of contact of the tangents from the point (x', y') to the circle $x^2 + y^2 = a^2$ is

$$xx' + yy' = a^2.$$

Prove that the tangents to the circle $2(x^2 + y^2) = 25$ at the points where the circle is met by the straight line $6x + 8y = 25$ are perpendicular.

4. Prove that the point whose co-ordinates are $(am^2, 2am)$, where m is variable, lies on the parabola $y^2 = 4ax$, and that the equation of the tangent there is $y = x/m + am$.

P is the point $(am^2, 2am)$, and through P is drawn a straight line PQ , perpendicular to the tangent at P and meeting the parabola again at Q . Find the equation of this straight line and prove that if the co-ordinates of Q are $(an^2, 2an)$, $n = -\frac{m^2 + 2}{m}$.

Prove also that if $m^2 = 2$, one of the points of trisection of PQ lies on the axis of the parabola.

5. Prove that the equation of the tangent at the point (x_1, y_1) on the hyperbola $xy = c^2$ is

$$\frac{x}{x_1} + \frac{y}{y_1} = 2.$$

The axes of co-ordinates being rectangular, the tangent at a point P on this hyperbola meets the axes of x and y at the points T and T' respectively, and TR is drawn perpendicular to the x -axis to meet the curve at R .

Prove that $TR : OT'$ is a constant ratio.

SECTION II.

6. Show how to draw a circle touching two parallel straight lines and a straight line which intersects the parallel straight lines. Prove that there are two such circles and, if A, B are the points in which the third straight line meets the two parallel straight lines, prove that the distance between the centres of the two circles is equal to AB .

7. From a point P on the circumcircle of a triangle ABC perpendiculars are drawn to the sides of the triangle. Prove that the feet of these perpendiculars lie on a straight line (the pedal line).

If the chord of the circle through P parallel to BC meets the circle again at the point Q , prove that AQ is perpendicular to the pedal line of P .

8. A straight line meets the sides BC, CA, AB of a triangle ABC in the points X, Y, Z respectively. Prove that

$$\frac{BX}{CX} \cdot \frac{CY}{AY} \cdot \frac{AZ}{BZ} = 1.$$

A point O inside a triangle ABC is joined to the vertices and OA, OB, OC meet the sides BC, CA, AB at the points X, Y, Z respectively. If on BC a point X_1 is taken so that $BX_1 : CX_1 = BX : XC$, on CA a point Y_1 is taken so that $CY_1 : AY_1 = CY : YA$, and on AB a point Z_1 is taken so that $AZ_1 : BZ_1 = AZ : ZB$, prove that X_1, Y_1, Z_1 are on a straight line.

9. Prove that any chord of a circle through a given point is divided harmonically by the point, the polar of the point with respect to the circle, and the circle.

A triangle ABC is inscribed in a circle and P is the pole of AB . Through P a straight line is drawn parallel to AC meeting the circle in the points R and S . Prove that the pencils $A(SR, BP)$ and $C(SR, BA)$ are harmonic pencils, and deduce that BC bisects RS .

10. Define the radical axis of two circles, and prove that the radical axes of three circles taken in pairs meet in a point.

A variable circle passes through a fixed point A and cuts a given fixed circle in the points B and C ; the tangent at A to the variable circle meets BC in the point P . Prove that the locus of P is the straight line joining the middle points of the tangents from A to the fixed circle.

DYNAMICS

ADDITIONAL MATHEMATICAL SUBJECT

(Higher Grade)

Monday, 26th March—2 P.M. to 4 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.

Square-ruled paper is provided.

The value attached to each question is shown in brackets after the question. Marks will be deducted for careless or badly arranged work.

SECTION I.

All the questions in this Section should be attempted.

1. Prove the formula $s = ut + \frac{1}{2}ft^2$, where s is the distance travelled in time t by a point which, starting with velocity u , moves in a straight line with uniform acceleration f .

Two particles start from rest at the same point and move with uniform acceleration 6 ft./sec.² and 8 ft./sec.² in straight lines at right angles to each other. Show that the straight line joining them always remains parallel to itself and lengthens with uniform acceleration 10 ft./sec.² (16)

2. Find the resultant of two given parallel forces.

Forces act at two corners of a triangular lamina, in the same direction parallel to the bisector of the third angle of the triangle and proportional to the sides opposite the corners at which they act. Shew that their resultant passes through the third corner. (16)

3. Two particles of masses m and m' ($m > m'$) are attached to the ends of a light string which is hung over a smooth, light pulley. Prove that the particles will move with acceleration $\frac{m - m'}{m + m'}g$, and find the tension of the string.

The masses of the particles being respectively 41 gm. and 39 gm., the lighter is made to move downwards with velocity 35 cm./sec. and the system is then set free. How far and for how long a time will the lighter particle descend before coming momentarily to rest?

$$[g = 980 \text{ cm./sec.}^2]. \quad (16)$$

4. State the conditions of equilibrium of a solid body floating on a liquid.

A cylindrical jar of radius a contains water. A sphere of specific gravity $\frac{2}{3}$ and radius $\frac{1}{2}a$ is introduced. Prove that the surface of the water in the jar rises a distance $\frac{1}{9}a$.

(16)

SECTION II.

Only two questions should be attempted from this Section.

5. A heavy particle of mass m is placed on a rough inclined plane whose inclination, α , to the horizon is great enough to cause the particle to slide down. The coefficient of friction between the plane and the moving particle is $\tan \beta$. If the particle starts from rest, find, after time t —

- (i) The kinetic energy of the particle;
- (ii) The work done on the particle by gravity;
- (iii) The work done against friction;

and verify that the first is equal to the difference between the second and third. (18)

6. The arms of a balance are unequal, and one of the scale-pans is loaded. A body whose true weight is P appears to be of weight W when placed in the loaded pan and of weight W' when placed in the unloaded pan.

Prove that the ratio of the lengths of the arms is $\frac{P + W}{W' - P}$ and that the load in the scale-pan is $\frac{WW' - P^2}{P - W}$. (18)

7. The coupling between an engine and a train of mass 96 tons can bear a tension equal to the weight of 12 tons. Treating the train as a particle, and neglecting friction, air-resistance, &c., find the shortest time in which a speed of 30 miles an hour may be attained, from rest, on a level line, and also the distance the train will have travelled before that speed is attained. [$g = 32 \text{ ft./sec.}^2$].

When the train has reached this speed, steam is shut off and the line begins to rise at the rate of one foot for every 300 ft. of line traversed. How much farther will the train go before coming to rest? (18)

8. Describe and explain the action of a simple form of compression pump. If the volume of the reservoir is V and that of the barrel of the pump is v , show that, after n strokes of the pump, the pressure in the reservoir is $1 + \frac{nv}{V}$ atmospheres. There is supposed to be no untraversed space in the barrel and no change of temperature.

Equal masses of air, at the same temperature, are contained in cubical boxes of edges 1 ft. and 1 in. respectively. Prove that the resultant thrust on one face of a box is twelve times as great in the latter case as in the former. (18)

BOOKKEEPING

Monday, 26th March—10 A.M. to 1 P.M.

The value attached to each question is shown in brackets after the question. In addition, 25 marks are allowed for writing, ruling and style.

1. From the following note of balances at 31st December, 1926, extracted from the books of A. B. you are required to make up the Trial Balance, inserting the amount of Capital:—

Overdrawn at Bank, £18; Sundry Debtors, £732; Rent, £120; Sales, £4,219; Petty Expenses, £28; Discounts allowed me, £73; Purchases, £2,904; Sundry Creditors, £398; Stock, £1,482; Cash in hand, £45; Bad Debts, £11. (15)

2. What is meant by "Days of Grace," C.I.F., *Pro forma* Invoice, Composition, and Insolvent? (10)

3. Give illustrations of at least three ways in which a cheque may be crossed. (5)

4. In what way does a Trial Balance differ from a Balance Sheet ? (5)

5. At 1st January, 1927, Messrs. Allday and Burton had the following assets and liabilities :—

Cash at Bank, £763 5s. 10d.; Creditor, D. Cameron, £101 7s. 4d.; Debtor, E. Wilson, £17 4s. 10d.; Stock, £359 12s. 4d.; Bill Payable, due on 29th January, £429 8s. 7d.; Bill Receivable, due 3rd February, £262 5s. 1d.

The Capital was held equally by A. Allday and B. Burton.

Their transactions during the month of January were as follows :—

1927.

- Jan. 1. Drew from Bank for cash, £20.
 3. Bought goods of R. Jones, £175 19s. 3d.
 Gave him my acceptance for £150 at 3 months' date.
 5. Paid D. Cameron's Account by cheque.
 7. Discounted at Bank Bill due 3rd February for £260 10s.
 10. Received cheque from E. Wilson's liquidator, being first and final dividend of 10s. in the £.
 Balance of his account written off as a bad debt.
 11. Sold goods to W. Brown, £440 10s. 6d.
 14. Received from W. Brown cheque for £250 as a payment to account.
 17. Sold goods to A. Robinson, £328 12s. 5d.
 Received his Bill at 60 days' sight for £300.
 18. Settled R. Jones's Account by cheque.
 19. W. Brown forwards cheque for £189 in full settlement.
 24. Bought goods of D. Cameron, £433 11s. 4d.
 27. Discounted A. Robinson's Bill for £297 8s. 2d.
 Paid proceeds into Bank.
 29. Bill payable due to-day met at Bank.
 31. Cash sales for month, £58 14s. 9d., paid into Bank.
 Petty expenses for month, £17 3s. 11d.
 Drew cheque for £17 3s. 11d. for cash.

Allow for salaries for the month for each partner at the rate of £120 per annum. Value of stock at 31st January, £237 10s. 6d.

Open the necessary Books of Account and record the above transactions therein. Bill Books are not required. Post to Ledger. Prepare Trial Balance, Profit and Loss Account, and Balance Sheet as at 31st January, 1927.

(90)

COMMERCIAL ARITHMETIC.

(FIRST PAPER.)

Monday, 26th March—2 P.M. to 2.30 P.M.

This paper will be taken up at the end of half-an-hour, when the second paper will be given out.

The sums are not to be copied out, and all the calculations required are to be performed mentally.

More importance will be attached to accuracy than to quickness.

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

Fill this in first.

Name of School _____

Name of Pupil _____

1.—Add:—

(a)

£	s.	d.
489	17	11 $\frac{3}{4}$
952	4	5
13,796	15	8 $\frac{3}{4}$
567	17	3
8,984	13	9 $\frac{1}{2}$
378	6	11 $\frac{1}{4}$
2,890	19	7 $\frac{1}{4}$
7,652	7	10

(b)	Miles.	Furlongs.	Poles.	Yards.	Feet.	Inches.
	9	7	32	4	1	11
	7	2	15	2	—	7
	13	5	9	1	2	3
	1	4	26	3	2	11
	18	3	17	5	1	9

(7)

2. Write down the values of the following :—

$$\begin{array}{r}
 2397 \times 17 \underline{\hspace{10em}} \\
 2 \text{ cwts. of apples at } 8d. \text{ per lb. } \underline{\hspace{10em}} \\
 \text{The square root of } 362404 \underline{\hspace{10em}} \\
 0.119 \times 3.12 \underline{\hspace{10em}} \\
 1.3 \times 0.007 \hspace{10em} (9)
 \end{array}$$

3. Express :—

$$\begin{array}{r}
 \pounds 0.0375 \text{ in pence } \underline{\hspace{10em}} \\
 \frac{1}{3} \text{ as a decimal to three} \\
 \text{decimal places } \underline{\hspace{10em}} \\
 521 \text{ litres} + 2 \text{ kilolitres in hectolitres } \underline{\hspace{10em}} \\
 \text{The square of } 17 \text{ decimetres in square metres } \underline{\hspace{10em}} (9)
 \end{array}$$

COMMERCIAL ARITHMETIC

(SECOND PAPER)

Monday, 26th March—2.30 P.M. to 4 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 logarithmic tables are provided.

All the working must be shown in its proper position in the answer, and the different steps of the calculation should be shortly indicated in words.

Algebraical symbols may be used if properly explained.

The value attached to each question is shown in brackets after the question. In addition, 7 marks are allowed for neatness, arrangement and style.

1. Find the cost of flooring a room 18 ft. by 11 ft. 3 in. with planking $4\frac{1}{2}$ inches wide at 1s. 4d. per linear foot. (7)

2. The Budget estimate and the actual receipts from Customs and Excise Duties in the year ended 31st March, 1926, were :

	Customs.	Excise.
Estimates	- £102,040,000	£137,220,000
Receipts	- £103,282,000	£134,476,000

By what percentage of the total estimate did the total receipts fall short of what was expected? (Answer to be correct to the third decimal place.) (7)

3. A garage proprietor purchased a barrel of oil containing 40 gallons for £13 6s. 8d. He sold the oil at $11\frac{1}{2}d.$ per pint. If 7 quarts were lost by leakage, what was the amount of his profit? (8)

4. What is the difference between (a) the true discount and (b) the banker's discount on a bill for £2,300 discounted 9 months before it is due at $3\frac{1}{2}$ per cent. per annum? (8)

5. A man having invested a sum of money in $3\frac{1}{2}$ per cent. Conversion Loan receives, quarterly, £112 after deduction of Income Tax at 4s. in the £. What is the amount of Stock he holds? (9)

6. If the rates of exchange London on New York, London on Paris, and Paris on New York are respectively 4.9 dol. to £, 124.75 fr. to £, and 25.45 fr. to dol., what is gained by a London merchant transmitting £50,000 to New York *via* Paris? (Answer to be correct to two decimal places.) (9)

7. At approximately what rate per cent. per annum compound interest will £5,384 amount to £6,857 in 7 years? (10)

8. Under the Rating (Scotland) Act, 1926, an occupier of agricultural land is allowed a deduction of 75 per cent. from his assessed rent for purposes of the occupier's share of Rates. A tenant farmer's assessed rent, which was formerly £527 10s., with deductions allowed amounting to 65 per cent., has been raised by 10 per cent. If the Rates remain unchanged at 6s. in the £, what is the effect of these changes on the Rates payable by him? (10)

SCIENCE

HIGHER GRADE—(BOTANY)

Tuesday, 27th March—2.15 P.M. to 4.15 P.M.

*Not more than FIVE questions should be attempted.
Answers should, wherever possible, be illustrated by
diagrams.*

N.B.—Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

1. Give an orderly, illustrated description of the flower of the daffodil, including a drawing of a cross-section of the ripening ovary. In what respects does the flower of this plant differ from that of the hyacinth?

2. Describe, with illustrations, any apparatus for demonstrating the process of transpiration in plants and for measuring its rate. What are the chief causes of variation in the rate, and how would you demonstrate them by experiment?

3. Give an account of the chief features of wind-pollinated flowers. Illustrate your answer by reference to four examples.

4. In what parts of a flowering plant do the following structures usually occur, and what are their uses?—

medullary rays, placenta, plerome, collenchyma, sieve tube, scutellum, micropyle.

5. Give an explanatory account of the chief adaptive characteristics of plants living in water, and of those growing in dry situations. Refer in your answer to particular examples.

6. State the exact botanical nature of the component parts of any *five* of the following:—an onion, a banana, "beech mast," a nettle sting, an acorn, a rose "thorn," an apple.

7. Describe in detail the flower of *either* a deadnettle, *or* a speedwell, *or* a violet, giving the floral diagram and formula. Mention the most common situation in which the plant you select may be found, its time of appearance in your district, and the nature of its fruit.

SCIENCE

HIGHER GRADE—(CHEMISTRY)

Wednesday, 28th March—2.15 P.M. to 4.15 P.M.

Not more than FIVE questions should be attempted. Answers should, wherever possible, be illustrated by diagrams, and supplemented by equations.

H = 1, O = 16, Na = 23, S = 32, C = 12.

Mathematical tables will be supplied to those who desire them.

N.B.—Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

1. Compare and contrast present-day views with those held in the eighteenth century regarding the nature of combustion.

2. State clearly what is meant by the equivalent weight of an element, and write short notes on four different methods of determining equivalents. Describe in detail the method you would adopt to find the equivalent of copper.

1.5 grams of a metal whose valency is known to be three gave 1.8 grams of oxide when completely oxidised. Find (a) the equivalent weight of the metal, (b) its atomic weight, (c) its specific heat.

3. Describe in detail the laboratory method of preparing nitric oxide, and mention two experiments you would perform to illustrate important properties of the gas.

When iron wire is heated in nitric oxide the metal combines with the oxygen, leaving nitrogen which occupies one half of the volume originally occupied by the nitric oxide. The density of nitric oxide is 15. Use these facts to find the formula of the gas.

4. Explain the difference between carbonates and bicarbonates, illustrating your answer by reference to the corresponding salts of another acid.

A certain weight of sodium bicarbonate was heated to dull redness for about half an hour. The residue was then dissolved in water, and the solution made up to one litre. 500 c.c. of the solution were exactly neutralised by 45 c.c. of normal sulphuric acid. Find (a) the normality of the solution, and (b) the weight of sodium bicarbonate used.

5. State briefly one method of preparing each of the following substances:—

magnesium oxide; iodine; sodium chloride;
sulphur trioxide; sodium hydroxide.

In what class would you place each of these substances? Give reasons.

6. Describe experiments by which you would distinguish between (a) manganese dioxide and carbon;

(b) hydrogen and nitrogen; (c) sulphuric acid and hydrochloric acid; (d) red phosphorus and mercuric oxide; (e) potassium nitrate and potassium sulphate.

7. Write a clear explanatory note on *five* of the following:—(a) the use of helium in airships; (b) the use of calcium carbide in cycle lamps; (c) the effervescence that takes place when a bottle of lemonade is opened; (d) the use of yeast in bread-making; (e) the ingredients of gunpowder; (f) the tarnishing of silver egg-spoons; (g) the fact that safety matches strike on the box only.

SCIENCE

HIGHER GRADE—(ENGINEERING)

Wednesday, 28th March—2.15 P.M. to 4.15 P.M.

FIVE questions should be attempted, viz., THREE questions from Section A, and TWO questions from Section B.

When Candidates use a formula they must explain each symbol and show as far as possible how the formula is built up. Units must always be stated.

Take $\pi = \frac{22}{7}$, and $g = 32$ ft. per sec. per sec.

Four-place logarithmic tables are provided.

N.B.—Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

SECTION A.

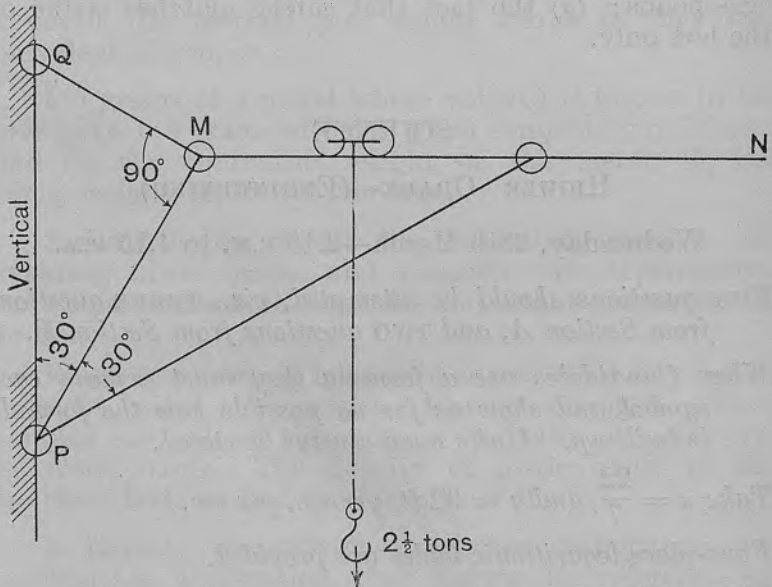
1. Relatively to a south-east current flowing at 5 miles per hour a ship is steaming due east at the rate of 15 miles per hour. Determine the *actual* velocity of the ship, and its velocity relative to a second ship, steaming at the rate of 20 miles per hour, whose *actual* course is due north.

If the first ship is 10 miles due north of the second at 10 a.m., find their distance apart at 11.30 a.m.

2. A freely jointed crane of the form shown in the figure on page 2 is supported at the joints *P* and *Q*.

It carries a load of $2\frac{1}{2}$ tons hung from a small frictionless trolley which can be moved to any required position along the horizontal member MN . Determine the position of the load on MN , when the reaction at P is horizontal; and find the reactions, and the total longitudinal stress in each member, when the load is in this position.

(You may, if you wish, prick through the figure on to your examination book.)



3. A motor-car weighing one-and-a-half tons is running at 30 miles per hour on a straight horizontal road. It comes to a hill where the *descent* is 1 in 30 (1 ft. vertical fall in 30 down the slope). If, with the engine running free, the car on this slope just maintains a uniform speed of 30 miles per hour, find the total resistance.

On the return journey the car starts from rest on this hill, and with uniform rate of increase of speed attains a speed of 30 miles per hour in 15 minutes, thereafter maintaining this uniform speed for the rest of its journey up the hill. Assuming the total resistance to be the same for all speeds, determine the maximum horse-power developed by the engine, and the horse-power developed immediately after the uniform speed has been attained.

the centre of its travel over the cylinder ports. From this information and the fact that the connecting rod is $2\frac{1}{2}$ cranks in length, draw the valve diagrams, one for each end, to enable you to complete the following table:—

	Cover end.	Crank end.
Radius of eccentric -	-	-
Admission (angle of crank)	-	-
Lead - - - -	-	-
Max. port opening -	-	-
Cut off - - - -	-	% of stroke
Release - - - -	-	% of stroke
Compression - - - -	-	" "
Lap, outside - - - -	-	" "
Lap, inside - - - -	-	" "
Angle of advance - - - -	-	-

[NOTE.—Begin with the cover end; and observe particularly that one of the inside laps is negative.]

SCIENCE

LOWER GRADE—(GEOGRAPHY)

Wednesday, 21st March—10 A.M. to 12.30 P.M.

SIX questions should be attempted, viz., the whole of Section A, TWO questions from Section B, and TWO questions from Section C.

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

N.B.—Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

SECTION A.

The whole of this Section should be attempted.

1. On the accompanying map of part of the British Isles—

- (a) Draw two lines indicating the boundaries of the Midland Valley of Scotland, marking and naming the four towns at which your lines touch the coast. Name four important hill groups included in the Midland Valley so defined, and mark and name the towns of Perth, Stirling and Dumbarton.

- (b) Shade lightly on the map the area below 500 ft. bounded to the west by the Pennine chain, to the east by the sea, to the north by the River Tees and to the south by the Rivers Aire, Lower Ouse and Humber. Name the hill-groups which rise from the plain so defined, and also the Vale of York, Flamborough Head, and Holderness. Name the River Derwent. Mark and name one important town serving as a centre for the agricultural produce of the plain.
- (c) Mark and name one area in which granite is worked, one in which salt is worked and one in which slate is worked. In each case mark and name a town connected with the product.

Name also the Rivers Bann, Ribble, Trent and Boyne. (20)

2. On the accompanying map of the Indian Ocean—

- (a) Mark two areas producing gold, two producing precious stones, and two producing mineral oil, and in each case mark and name one town connected with the product.
- (b) Mark and name one island and one continental area of high density of population, marking and naming one town within each, and naming one important product.
Mark and name also one island and one continental area of low density of population.
- (c) Draw and name the Tropic of Cancer and mark and name three towns on or near it.

Indicate clearly by some form of shading the parts of the area crossed by the Tropic of Cancer which have a low and those which have a high mean annual rainfall. Where the rainfall is high show by arrows the direction of the winds which bring the rain. (20)

SECTION B.

[Two questions should be attempted from this Section.]

3. Give some account of the fishing industry of Scotland, naming the chief ports from which it is

carried on, and pointing out what special advantages each possesses. (15)

4. With the help of the map used in Section A, 1, discuss in detail the effect of relief on the course of *one* main railway route from Edinburgh to London. (The route need not be discussed beyond the limits of the map.) (15)

5. Select any *two* of the following pairs of ports, and discuss the relative position and the characteristic traffic of the members of each pair selected:—Bristol and Gloucester; Hull and Grimsby; Liverpool and Birkenhead; Portsmouth and Southampton; Glasgow and Greenock. (15)

6. What is meant by the localisation of industry, and what causes influence localisation? Illustrate by some account of the linen and the pottery industries of the British Isles. (15)

SECTION C.

[Two questions should be attempted from this Section.]

7. What are the main products of the lands round the Baltic Sea? Name some of the chief ports, indicating the kind of trade carried on. From what great disadvantages does the Baltic suffer as compared with the North Sea? (15)

8. Write a short geographical account of *one* of the following, laying stress upon the relief, climate and products:—Nigeria, California, Cape of Good Hope, New South Wales. Illustrate by a sketch-map. (15)

9. State as precisely as you can the position of Montreal and explain the reasons for its importance. Contrast it briefly with Quebec and with Vancouver. (15)

10. Write a short geographical essay on *one* of the following subjects:—the Sugar Production of the World; the Manufacturing Industries of the United States; the World Trade in Wheat; the Coniferous Forests of the Northern Hemisphere. (15)



Crown Copyright Reserved. *Cougar Angus 3 miles*

Scale of One Inch to a Statute Mile = $\frac{1}{63360}$

Ordnance Survey, 1928.

LEAVING CERTIFICATE EXAMINATION, 1928.

SCIENCE.
HIGHER GRADE—(GEOGRAPHY).

M A P .

FILL THIS IN FIRST.

Name of School.....

Name of Pupil.....

TO BE PINNED INSIDE THE CANDIDATE'S BOOK OF ANSWERS
AND THUS SENT TO THE DEPARTMENT.

SCIENCE

HIGHER GRADE—(GEOGRAPHY)

Wednesday, 21st March—10 A.M. to 12.30 P.M.

FIVE questions should be attempted, viz., the whole of Section A, TWO questions from Section B, and TWO questions from Section C.

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

N.B.—Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

SECTION A.

The whole of this Section should be attempted.

1. The accompanying map includes parts of the counties of Perthshire and Forfarshire, the larger streams shown being the Isla and its tributary the Ericht :—

(a) Name the great natural regions of Scotland represented on the map, and describe their characters so far as they are shown on it. (12)

(b) Analyse the positions of Blairgowrie, Alyth and Meigle, illustrating by sketch-maps, contoured where necessary. Discuss the relations of these three places to the lines of communication. (16)

(c) Is it possible to see the highest point of the Hill of Alyth from the most northerly house in New Alyth? Indicate very clearly how your answer is arrived at. (8)

SECTION B.

Two questions should be attempted from this Section.

2. Discuss in detail the causes influencing the distribution of population in the Midland Valley of Scotland. (16)

3. Give a reasoned account of the trade carried on between the British Isles and *either* Baltic *or* Mediterranean ports. (16)

4. Give some account of the kinds of plants you would expect to find in *one* of the following regions—sand-dunes, wet moors, high mountains. Show how the characters of the plants are related to the physical conditions prevailing in the region selected. (16)

5. Give a detailed description, illustrated by a sketch-map, of the course of the Rhine, *or* of the Elbe, *or* of the Danube, indicating the importance of the river selected as a line of communication, and naming the chief products of the neighbouring areas. (16)

6. Discuss, with reasons, the local varieties of climate which occur within the British Isles. Illustrate your answer by showing the relation of local varieties of climate to the distribution of agricultural products. (16)

SECTION C.

Two questions should be attempted from this Section.

7. Give a reasoned account of the distribution of population in Australia, illustrating by a sketch-map. (16)

8. Describe the course of a typical river, making clear, by reference to simple observations and experiments, why it is that a river both transports and deposits rock-waste. What kinds of river are suitable for the generation of electrical power, and why? (16)

9. *Either* : Divide China into natural regions, indicating the main resources of each;

Or : Give a geographical account of the Indo-Gangetic plains, offering explanations of their great density of population. Illustrate by a sketch-map. (16)

10. Discuss the coal and iron resources of the United States, comparing the distribution of coal there with that in Canada. How do you explain the fact that Canada both exports coal to the United States and imports coal from the States? (16)

11. The following data refer to three towns in the interior of North America, all situated in middle latitudes (40° – 50° N.). (a) is in the Great Lakes region of Canada; (b) is in the prairie region of the western United States; (c) is in the desert area of the western United States. Discuss the climates of the three stations so far as they are brought out by the figures, and estimate the probable effects of the local climate on the utilization of the land in the vicinity of each station:—

Average Temperatures ° F.		Mean Annual Rainfall. (inches)	Mean Rainfall of Wettest Month. (inches)	Mean Rainfall of Driest Month. (inches)
Jan.	July.			
(a) 7.0	62.0	23.0	3.7 (July)	0.6 (Feb.)
(b) 7.0	69.0	17.5	3.4 (June)	0.5 (Jan.)
(c) 29.0	75.5	16.0	2.2 (May)	0.5 (July)

Note.—At (b) July, August and September are drier than May; at (a) August and September are wetter than May.

(16)

SCIENCE.

HIGHER GRADE—(PHYSICS)

Wednesday, 21st March—1.30 P.M. to 3.30 P.M.

Not more than FIVE questions should be attempted. One of these must be taken from Section I. (Mechanics), and one from each of two other Sections. The remaining two questions may be selected from any part of the paper.

Answers should, wherever possible, be illustrated by diagrams.

Mathematical tables will be supplied to those who desire them.

Before handing in their examination books Candidates should enter in the space provided on the front cover the numbers of the questions they have attempted.

N.B.—Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

SECTION I. (MECHANICS).

1. State the principle of Archimedes, and show how it can be applied to find the density (or the specific gravity) of a piece of cork.

A balloon whose total weight uninflated is 150 kilograms is moored to the ground and then filled with hydrogen of density 0.090 gram per litre. If the capacity of the envelope is 512,000 litres, and the density of the air is 1.293 grams per litre, find the tension in the mooring-rope.

2. What is meant by the moment of a force about a point? State the principle of moments, and describe an experiment to prove its truth.

A heavy uniform rod, 3 feet long, with weights of 6 lbs. and 10 lbs. respectively suspended from its two ends, balances about a point 15 inches from one end. Show on a diagram the forces acting on the rod, and *calculate* its weight and the pressure on the balancing point.

3. What is the relation between the magnitude of a force, the mass on which it acts, and the acceleration which it produces? State clearly the units you have in mind.

A lift is accelerated uniformly from rest till at the end of two seconds it is ascending with a velocity of five feet per second. It continues to ascend at this velocity for several seconds, and is finally brought uniformly to rest in two seconds. Find (a) the accelerations, and (b) the variations in the pressure on the floor of the lift caused by a passenger whose weight is 12 stones.

$$[g = 32 \text{ ft./sec.}^2.]$$

SECTION II. (SOUND).

4. What is meant by the term "frequency"?

Describe a method of obtaining the frequency of a tuning fork, indicating possible sources of error.

A cog-wheel with 36 teeth revolves 480 times per minute. What is the frequency of the note produced when a card is held against the revolving teeth? Find also the wave-length of the note if the velocity of sound in air at the time of the experiment is 1,100 feet per second. What effect would a rise in temperature have on the pitch of the note? Give the reason.

5. Write notes on any *four* of the following :—

- (a) echoes; (b) Doppler effect; (c) beats;
- (d) the motion of the air particles when a sound wave is propagated; (e) resonance; (f) free and forced vibrations.

SECTION III. (HEAT).

6. Distinguish carefully between the coefficient of real and the coefficient of apparent cubical expansion in the case of a liquid.

Describe any experiment you have done to find the coefficient of apparent cubical expansion of a liquid, indicating any precautions you took and the method of calculation.

The coefficient of real cubical expansion of mercury is 0.00018, and the coefficient of *linear* expansion of glass is 0.000008. If the mercury in a graduated tube occupies 100 divisions at a temperature of 15° C., what is the temperature when it occupies 101.4 divisions?

7. Define latent heat and describe an experiment whereby the latent heat of fusion of ice may be found, indicating any precautions you would take to secure accuracy.

28.5 grams of water at a temperature of 19° C. are contained in a calorimeter placed over a steady Bunsen flame. The water reaches a temperature of 100° C. and begins to boil in 3 minutes 48 seconds, and at the end of a further 25 minutes 20 seconds it is completely boiled away. Find, as accurately as these data allow, the average rate at which the Bunsen is supplying heat to the contents of the calorimeter, and calculate an approximate value for the latent heat of vaporisation of water.

8. Explain any *four* of the following :—

- (a) Salt is put on icy streets in winter in order to melt the ice.
- (b) Vacuum flasks keep hot liquids hot and cold liquids cold.
- (c) A good radiator is a good absorber of heat, whilst a good reflector is a bad radiator of heat.
- (d) A Davy lamp does not ignite inflammable gases in a mine, but gives due warning of their presence.

- (e) Ice can be manufactured by means of a machine that causes air to expand suddenly.
- (f) An ordinary pendulum clock goes slow in summer and fast in winter.

SECTION IV. (LIGHT).

9. Define the terms "refractive index" and "critical angle," and describe a method of finding the refractive index of water.

Explain why, whilst a ray of light passing obliquely from air into water is bent towards the normal, the under-water portion of a straight rod held obliquely appears to be bent away from the normal.

10. How would you find accurately the focal length of (a) a double convex lens; (b) a double concave lens?

Give an explanation of the fact that the red and the violet rays of a beam of sunlight are not focussed at the same point by a double convex lens.

SECTION V. (ELECTRICITY AND MAGNETISM).

11. Explain Wheatstone's method of measuring electrical resistance, and describe, with the aid of a sketch, how the method is applied in a wire metre bridge.

Two coils having resistances of 4 and 5 ohms respectively are connected in parallel. What is the total current flowing if the former carries 10 amperes? What third resistance must be connected in parallel to reduce the current in the 4-ohm coil to 6 amperes, the total current remaining the same?

12. You are asked to find how the intensity of the magnetic field at the centre of a circular coil carrying a current varies with the strength of the current, the mean radius of the coil, and the number of turns of wire. Briefly describe your experiments.

A current passing through a circular coil set in the magnetic meridian deflects through 20° a small compass needle placed at the centre of the coil. Find from the following data the strength of the current in amperes:—

Number of turns of wire	= 4.
Mean radius of coil	= 24 cm.
Value of H	= 0.18 dyne.
Value of π	= $3\frac{1}{7}$.

13. Describe the experiments by which you verified the laws of induction of a charge of static electricity.

A positively charged body is held above the uncharged plate of an electroscope. Describe and explain what happens. What effect (if any) would be produced if between the charged body and the plate there were introduced (a) a large metal plate insulated; (b) the same plate earth-connected; (c) a sheet of glass? Give a reason in each case.

14. Define (a) strength of magnetic field; (b) neutral point.

A bar magnet is placed on a table with its axis in the magnetic meridian. Explain clearly how you would find the position of the neutral points when the north pole points (1) to the north, and (2) to the south. How would you deduce the magnetic moment of the magnet from your results?

A bar magnet, 24 cms. in length, lies horizontally in the magnetic meridian with its north pole pointing to the south. If neutral points are found 20 cms. from either pole of the magnet, calculate the magnetic moment. [$H = 0.18$ dyne.]

SCIENCE

HIGHER GRADE—(PURE ZOOLOGY)

Monday, 26th March—2 P.M. to 4 P.M.

Not more than FIVE questions in all should be attempted.

Answers should, wherever possible, be illustrated by diagrams.

N.B.—Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

1. Give a full account of the structure of a Protozoon, such as *Paramoecium*, and explain how each part is used. From what you have written deduce as many of the properties of living matter as you can.

2. Describe the general appearance of *Hydra*. Make a large diagram of a cross-section to show the constituent cells. Draw separately a "stinging" cell and an endoderm cell,

3. Describe briefly the nature of the chief organs of sense in the following animals:—crayfish, starfish, snail, haddock. Make clear the importance of the position occupied by each of these organs on the body of the animal.

4. Give an illustrated account of the plan of structure (systems and organs) exhibited by an *annelid*, e.g., the earthworm, or *Nereis*. In what respects does this plan resemble, and in what respects does it differ from, the vertebrate arrangement as seen, for example, in a fish?

5. Make a named drawing of any *three* of the following:—

(a) the structures visible in the widely opened mouth of a frog;

(b) an antero-posterior section of the eye of a vertebrate;

(c) the third maxillipede of a crayfish;

(d) an excretory organ of an earthworm;

(e) the bones in the wing of a bird.

6. Describe in detail the breathing system of a bird, e.g., a pigeon, and give an account of the respiratory process. What are the main differences between birds and mammals in these respects (system and process)?

7. Give an orderly account of the alimentary canal of a rabbit or other mammal. Explain how food material is conveyed along it, and describe what happens to the various constituents of this material in the different regions of the digestive tract.

SCIENCE.

HIGHER GRADE—(ZOOLOGY AND HUMAN PHYSIOLOGY)

Monday, 26th March—2 P.M. to 4 P.M.

Not more than FIVE questions in all should be attempted.

Before handing in their books Candidates should enter in the space provided on the front cover the numbers of the questions they have attempted in both Sections.

Answers should, wherever possible, be illustrated by diagrams.

N.B.—Write legibly and neatly, and leave a reasonable space between the lines. Marks will be deducted for bad writing.

SECTION I.—ZOOLOGY.

1. Give an illustrated account of the plan of structure (systems and organs) exhibited by an *annelid*, e.g., the earthworm, or *Nereis*. In what respects does this plan resemble, and in what respects does it differ from, the vertebrate arrangement as seen, for example, in a fish?

2. Make a named drawing of any *three* of the following:—

- (a) the structures visible in the widely opened mouth of a frog;
- (b) an antero-posterior section of the eye of a vertebrate;
- (c) the third maxillipede of a crayfish;
- (d) an excretory organ of an earthworm;
- (e) the bones in the wing of a bird.

3. Describe in detail the breathing system of a bird, e.g., a pigeon, and give an account of the respiratory process. What are the main differences between birds and mammals in these respects (system and process)?

4. Give an orderly account of the alimentary canal of a rabbit or other mammal. Explain how food material is conveyed along it, and describe what happens to the various constituents of this material in the different regions of the digestive tract.

SECTION II.—HUMAN PHYSIOLOGY.

5. Name any two *enzymes* occurring in the body; state in what organs they are produced, and what changes they bring about.

6. Write full notes on—

- (a) ear *or* eye,
- (b) liver *or* kidney,
- (c) muscle *or* nerve,
- (d) lung *or* skin.

7. Describe any one ductless gland. Compare its structure and mode of action with those of any externally secreting gland; e.g., the salivary gland.

APPENDIX.

LIST OF AUTHORITIES BY WHOM EVIDENCE OF SUCCESS AT THE LEAVING CERTIFICATE EXAMINATION IS CONDITIONALLY ACCEPTED IN LIEU OF PRELIMINARY EXAMINATIONS. FOR PARTICULARS AS TO THE CONDITIONS GOVERNING ACCEPTANCE REFERENCE SHOULD BE MADE TO THE REGULATIONS OF THE AUTHORITY CONCERNED.

- Scottish Universities Entrance Board :
- University of Aberdeen.
 - University of Edinburgh.
 - University of Glasgow.
 - University of St. Andrews.
- University of Oxford.
- University of Cambridge.
- University of London.
- University of Bristol.
- University of Durham.
- Northern Universities Joint Matriculation Board.
- University of Wales.
- The Queen's University of Belfast.
- Girton College, Cambridge.
- Imperial College of Science and Technology.
- Royal Holloway College, Englefield Green, Surrey.
- The Lords of Council and Session (for the purposes of the Law Agents Act).
- The Society of Solicitors before the Supreme Courts.
- The Law Society.
- The General Council of Medical Examination and Registration of the United Kingdom.
- The Royal College of Surgeons of Edinburgh.
- The Examining Board in England by the Royal College of Physicians of London and the Royal College of Surgeons of England.
- The Pharmaceutical Society of Great Britain.*
- The Chartered Accountants of Scotland.
- The Institute of Chartered Accountants in England and Wales.
- The Society of Incorporated Accountants and Auditors.

The London Association of Accountants, Limited.
 The Institute of Municipal Treasurers and Accountants
 (Incorporated).*
 The Faculty of Actuaries in Scotland.
 The Institute of Actuaries.
 The Chartered Insurance Institute.
 The Institute of Bankers.
 The Chartered Institute of Secretaries.
 The Royal Sanitary Association of Scotland.*
 The Faculty of Surveyors of Scotland.
 The Surveyors' Institution.
 The Royal Institute of British Architects.
 The Institution of Civil Engineers.
 The Institution of Mechanical Engineers.
 The Institution of Municipal and County Engineers.
 The Institute of Chemistry of Great Britain and Ireland.
 The Institute of Physics.
 The Royal College of Veterinary Surgeons.*

* Evidence of having obtained the Day School Certificate (Higher) is also accepted by these Bodies; and by the

Air Ministry—for entry as Apprentice Clerk, Royal Air Force.
 Admiralty—for entry into the Advanced Class of the Royal
 Navy.

SCOTTISH EDUCATION DEPARTMENT.—1928.

Reports, &c., 1926-27. Price 10s.; post free, 10s. 7d.

This Volume contains Reports, Statistics, Regulations, Minutes, Circulars, Leaving Certificate Examination Papers, &c.

Report of the Committee of Council on Education in Scotland, 1927-28. [Cmd. 3111.] Price 1s.; post free, 1s. 1d.

Fifty-Fourth Annual Report by the Accountant in Edinburgh (Year 1925-26). Price 9d.; post free, 9½d.

Second Quinquennial Report on Physical Education in Schools in Scotland, for the period of five years ended 30th June, 1922, by Dr. Lewis D. Cruickshank. Price 6d.; post free, 6½d.

General Reports for the year 1927 on Day Schools, by His Majesty's Chief Inspectors of Schools in Scotland. Price 1s.; post free, 1s. 2d.

Report and Statistics relating to the Training of Teachers, 1924-26. Price 1s. 9d.; post free, 1s. 10d.

Return showing (i) Grant-Earning Day Schools and Institutions, and (ii) Continuation Classes and Central Institutions, with Statistics relating thereto, for 1924-25. Price 5s.; post free, 5s. 2d.

Return showing Summarised Statistics relating to (1) Grant-Earning Day Schools and Institutions, and (2) Continuation Classes and Central Institutions, 1925-26. Price 1s.; post free, 1s. 1d.

Royal Scottish Museum. Report for the year 1921-22. Price 6d.; post free, 6½d.

Secondary Education: Report, 1915. Price 3d.; post free, 4d.

Leaving Certificate Examination Papers, including Day School Certificate (Higher) General Paper, 1927. Price 1s. 9d.; post free, 1s. 10½d.

Leaving Certificate Examination. Circular 30, relating to the Examination of 1928. Price 2d.; post free, 2½d.

Leaving Certificate Examination: Note as to Mathematics (Second Issue). Price 2d.; post free, 3d.

Lists of Education Authorities, &c., 1927. Price 1s.; post free, 1s. 1d.

Circular 44 (Alterations in the Examination System). Price 1d.; post free, 1½d.

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