(1001)

## LEAVING CERTIFICATE EXAMINATION, 1906.

## EXAMINATION PAPERS.

## ENGLISH.

## Lower Grade.

Thursday, 21st June.-10 A.m. to 12.30 P.m.
All Candidates should attempt eight questions (and no more)namely, Questions $1,2,3$, and 4, one or other of the alternatives given in Question 5 and in Question 6, one question in Section II., and one in Section III.

## Section I.

8. 9. Write out, and punctuate, the passage for dictation,
1. 2. Write an essay, of about two pages, on one of the following subjects :-
(i) Relate in your own words some striking incident in the life of your favourite character in Scottish history.
(ii) Discuss, in the form of a dialogue between two boys or two girls, the advantages and disadvantages of living in a large town.
1. 
2. He who ascends to mountain-t?ps shall find The loftiest peaks most wrapt in clouds and snow : He who surpasses or subdues mankind Must look down on the hate of those below. Though high above the sun of glory glow, And far beneath the earth and ocean spread, Round him are icy rocks, and loudly blow Contending tempests on his naked head, And thus reward the toil which to those summits led.
(i) Express, in a single sentence, the main thought of the above passage.
(ii) Invent or quote another metaphor to illustrate that thought.
(iii) Rewrite the last sentence in prose order, without adding, omitting, or changing any word.
(iv) What is the metre of the passage ? Scan the last line.
3. 4. Build up the following facts into a single connected composition, arranging them in what you consider the best order :-

The swallow has very long wings-lives on insects-has great powers of flight-feeds in the air-its feet not adapted for walking or climbing-has a broad, soft bill-migrates to warmer lands in winter-does not eat fruits or grubs-there are no insects in the air of Britain in the winter-the swallow is not swifter in flight than the falcon or carrierpigeon, but can turn and wheel more rapidly-has a long forked tail.
10. 5. Either, Discuss the force of the following suffixes, giving one example of each : -ish, -ling, -wise, $-f y$, -ize.
Show how new English words are still made when occasion for them arises ; and give five examples.

Or, Point out any faults in the following sentences, and rewrite each sentence in simpler and clearer form :-
(a) Elizabeth had a feeling for her cousin, but being a claimant for the crown of England, Elizabeth could not stand her cousin on account of that.
(b) Italy is a narrow tongue of land, the backbone of which is formed by the Apennines.
(c) In Newport, the place of his nativity, he engaged in commerce, erected a residence, and attained a considerable degree of popularity among his fellow townsmen.
(d) He married a lady who boasted of Portuguese extraction and predeceased him by some dozen summers.
(e) Neither the religion of the missionaries nor the trade of the merchants is the cause of the anti-foreign movement in China, though both have been used as levers to envenom it.
10. 6. Either, Describe any one of the following characters:-Touchstone, Portia, Cassius, Bottom, Mr. Greatheart, Will Wimble, Friday, Bailie Nicol Jarvie, Edie Ochiltree, Locksley, Tressilian, Mr. Stiggins, Squeers, Traddles, Scrooge.

Or, Select from among the English authors read as part of your school work during the past year the particular book you liked best, and explain why it specially interested you.

## Section II.

15. 7. Write a single paragraph on each of any two of the following themes, indicating in each case the later effects of the events that you narrate :-

The Celtic Church ; the Danish supremacy; the Normans in Scotland; The Hundred Years' War; the capture of Constantinople by the Turks; the political relations of Scotland with France ; the suppression of the Monasteries; the expansion of English commerce under Elizabeth; the

Thirty Years' War; the Solemn League and 'Covenant; the Revolution of 1688 ; the rivalry of France and Britain in the New World; the foreign policy of William Pitt the Younger; the Industrial Revolution and its effects on politics ; the Disruption ; Home Rule.
15. 8. What is meant by the Feudal System? Under the influence of what forces did it break down?
15. 9. "Britain has never interfered in the affairs of Europe except to preserve the balance of power." Discuss this statement, with illustrations from any period of history.
15. 10. Give a short account of the present powers of the House of Commons, showing how they have been gradually acquired.

## Section III.

15. 11. What are the chief races of men? How are they distinguished ? And how distributed?
1. 12. Contrast the physical configuration and natural resources of Scotland with those of Ireland, and show how the development of each country has been affected thereby.
1. 13. Name and locate the chief British coaling-stations in the Eastern Hemisphere, and discuss their strategical importance.
1. 14. Write a paragraph on each of any two of the following themes, embodying the more important facts regarding the subjects you select:-The mountain system of Central Europe ; Antarctic exploration; the wheat-lands of the World ; the political and strategical importance of the Low Countries ; the great cities of the United States ; German possessions in Africa ; the political and commercial interests of the Great Powers in the Pacific ; the Balkan States; the geographical distribution of volcanoes; the Moslem states in N. Africa; the river system of India.

## ENGLISH.

## Lower Grade.

Thursday, 21st June.-10.45 A.M.

## Passage for Dictation.

Whatever were occasionally the triumphs of this daring freebooter, they were often exchanged for reverses; and his narrow escapes, rapid flights, and the ingenious stratagems with which he extricated himself from imminent danger, were no less remembered and admired than the exploits in which he had been successful. In weal or woe, through

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every species of fatigue, difficulty and danger, his wife was his faithful companion. Their morality was of the old Highland sort, faithful friends and fierce enemies : the Lowland herds and harvests they accounted their own, whenever they had the means of driving off the one, or of seizing upon the other; nor did the least scruple on the right of property interfere on such occasions.

## ENGLISH.

Higher Grade and First Paper for Honours.

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\text { Thursday, 21st June.-10 A.M. to } 1 \text { P.M }
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Higher Grade Candidates should attempt eight questions (and no more) -namely, the whole of Sub-section A., one question fromSub-section B., two from Sub-section C., two from Section II, and one from Section III.
Honours Candidates should also attempt eight questions, two of which $18 \times+4$ must be Questions 1 and 2. They are not required to answer questions from Sections II. and III., although they may do so. They can obtain the full number of marks in Section I

## Section 1.

## Sub-section $A$.

20. 21. Write an essay, of about two pages, on one of the following subjects :-
(i) The virtues and failings of the Stuart dynasty.
(ii) "A great man is one who affects the mind of his generation."

Discuss this with reference to any great man either (a) of the Elizabethan or (b) of the Victorian Age.
(iii) "Amid the gloom

Spread by a brotherhood of lofty elms Appeared a roofless hut, four naked walls That stared upon each other.'

Describe such a ruined cottage in the Highlands.
15. 2. "He writes passionately, because he feels keenly ; forcibly, because he conceives vividly; he sees too clearly to be vague; he is too serious to be otiose; he can analyse his subject, and therefore he is rich; he embraces it as a whole and in its parts, and therefore he is consistent; he has a firm hold of it, and therefore he is luminous. When his imagination wells up, it overflows in ornament; when his heart is touched, it thrills along his verse. He always has the right word for the right idea, and

* The Values printed in brackets are those assigned for Honours.
never a word too much. If he is brief, it is because few words suffice; when he is lavish of them, still each word has its mark, and aids, not embarrasses, the vigorous march of his elocution. He expresses what all feel, but all cannot say; and his sayings pass into proverbs among his people, and his phrases become household words and idioms of their daily speech, which is tessellated with the rich fragments of his language, as we see in foreign lands the marbles of Roman grandeur worked into the walls and pavements of modern palaces."
(i) Describe, in your own language, the characteristics of good writing as they are here set forth.
(ii) Note three metaphors in the above passage, and explain their application.


## Sub-section B.

10. 3. Write short notes on the derivation and original meaning of the following words, and show the propriety of their use in the above passage (Question 2):-Passionately; vividly ; otiose ; embraces ; consistent; thrills ; embarrasses; idioms; fragments; foreign.
1. 4. Write short notes on the syntax of the words in italics in the following sentences, and give the modern prose equivalent for each sentence :-
(i) Hap what hap,

My basnet to a prentice cap,
Lord Surrey's o'er the Till.
(ii) Would he were fatter.
(iii) Women are angels, wooing.
(iv) Lord Angelo dukes it well.
(v) This not to do,

So grace and mercy at your most need help you, Swear!
10. 5. Show, with examples, how new words have been brought into the English language by each of the following agencies :-
(a) The Church.
(b) Feudal institutions.
(c) University learning.
(d) Colonisation.
(e) Commerce.

## Sub-section C.

(10. 6. Select two of the following passages. Assign each of them to its proper period, and (where you can) to its author, giving reasons for your decision. Name the metre, and comment on any felicities of language and rhythm:-
(i) Eftsoones they heard a most melodious sound, Of all that mote delight a daintie eare, Such as attonce might not on living ground, Save in this paradise, be heard elsewhere: Right hard it was for wight which did it heare To reade what manner musicke that mote be ; For all that pleasing is to living eare Was there consorted in one harmonee. Birdes, voices, instruments, windes, waters, all agree.
(ii) Their glittering tents he passed, and now is come Into the blissful field, through groves of myrrh, And flowering odours, cassia, nard, and balm ; A wilderness of sweets ; for Nature here Wantoned as in her prime, and played at will Her virgin fancies, pouring forth more sweet, Wild above rule or art, enormous bliss.
(iii) Not proud, nor servile ; be one poet's praise, That, if he pleas'd, he pleas'd by manly ways : That flatt'ry, ev'n to Kings, he held a shame, And thought a lie in verse or prose the same.
(iv) Still, as of yore, Queen of the North! Still canst thou send thy children forth. Ne'er readier at alarm-bell's call Thy burghers rose to man thy wall, Than now, in danger, shall be thine Thy dauntless voluntary line.
(v) Thou, in bewitching words, with happy heart, Did'st chaunt the vision of that Ancient Man, The bright-eyed Mariner, and rueful woes Didst utter of the Lady Christabel ; And I, associate with such labour, steeped In soft forgetfulness the livelong hours, Murmuring of him who, joyous hap, was found, After the perils of his moonlight ride, Near the loud waterfall; or her who sate In misery near the miserable Thorn.
(vi) Take wings of foresight; lighten thro'

The secular abyss to come,
And lo, thy deepest lays are dumb
Before the mouldering of a yew ;
And if the matin songs, that woke
The darkness of our planet, last,
Thine own shall wither in the vast,
Ere half the lifetime of an oak.
10. 7. Show, with illustrations, how large a part classical mythology has played in English poetry.
10. 8. Give a short summary of the opening scene of any one of Shakespeare's plays, and show the use of the scene in relation to the whole action of that play.

## Section II.

10. 9. Write a single paragraph on each of any two of the following themes, indicating in each case the later effects of the events that you narrate :-

The Celtic Church ; The Danish Supremacy ; the Normans in Scotland ; The Hundred Years' War ; The capture of Constantinople by the Turks; the political relations of Scotland with France ; the suppression of the Monasteries ; the expansion of English commerce under Elizabeth ; the Thirty Years' War ; the Solemn League and Covenant ; the Revolution of 1688; the rivalry of France and Britain in the New World; the foreign policy of William Pitt the Younger ; the Industrial Revolution and its effects on politics ; the Disruption ; Home Rule.
10. 10. What is meant by the Feudal System? Under the influence of what forces did it break down?
10. 11. "Britain has never interfered in the affairs of Europe except to preserve the balance of power." Discuss this statement, with illustrations from any period of history.
10. 12. Give a short account of the present powers of the House of Commons, showing how they have been gradually acquired.

## Section III.

15. 13. What are the chief races of men ? How are they distinguished ? And how distributed?
1. Name and locate the chief British coaling-stations in the Eastern Hemisphere, and discuss their strategical importance.
2. 
3. Write a paragraph on each of any two of the following themes,
10.)* embodying the more important facts regarding the subjects you select:-The mountain system of Central Europe ; Antarctic exploration; the wheat-lands of the World; the political and strategical importance of the Low Countries; the great cities of the United States; German possessions in Africa; the political and commercial interests of the Great Powers in the Pacific; the Balkan States; the geographical distribution of volcanoes; the Moslem states in N. Africa; the river system of India.
[^1]> ENGLISH.
> Honours.-Second Paper.
> Wednesday, 27 th June. -10 A.M. to 1 P.M.
> About sIx questions should be answered. Not more than two of these must be taken from Section $I I$.

## Section I.

16. 17. Describe the setting of the Canterbury Tales, and compare it with that of any other collection of stories known to you.
1. 2. Give some account of the rules that govern alliterative verse, with illustrations from the works of alliterative poets.
1. 3. Discuss the effect of the Protestant Reformation on Scottish literature.
1. 4. Name and describe any three notable works of prose translation into English (other than translations of the Bible), written before the year 1600 .
1. 5. Ben Jonson said that Spenser, "in affecting the Ancients, writ no language." Discuss this saying.
1. 6. From an analysis of any one of Shakespeare's tragedies, or from a comparison of several, deduce Shakespeare's conception of Tragedy.
1. 7. What is a Masque ? Show how it differs from a Comedy, and illustrate its nature from Milton's Comus.
1. 8. Refer, with quotations, to any passages of Shakespeare's work, which show his power of picturesque description.
1. 9. Trace the rise of familiar colloquial prose in the Seventeenth Century.
1. 10. Give some account of either Herrick or James Thomson, considered as a poet of country life.
1. 11. What are the essentials of good Satire? Illustrate your answer by referring to the works of Pope and Swift.
1. 12. Compare and contrast the poetical work of Gray with that of Collins.
1. 13. What parts of European (as contrasted with British) history are illustrated by Shakespeare's plays or by Scott's novels ?
1. 14. Discuss the effect of the French Revolution on English poetry.
1. 15. Where can the influence of Italy be traced in English literature of the Victorian Age ?
1. 16. How do the works of Tennyson, or of Browning, illustrate some of the main tendencies of thought in the Nineteenth Century ?

## Section II.

Optional Questions.
16. 17. Translate into Modern English :-

Đa het se cyning sellan Apollonie $\delta$ a hearpan. Apollonius $\delta$ a uteode, and hine scrydde, and sette ænne cynehelm upon his heafod, and nom $\delta$ a hearpan on his hand, and ineode, and swa
 nære Apollonius, ac ઠæet he wære Apollines, ઠ̌æra hæठenra god. $\ddagger a$ wear` stilnes and swige geworden innan ðære healle. And Apollonius his hearpnægl genom, and he $\delta^{\prime}$ a hearpestrengas mid cræfte astyrian ongan, and Øære hearpan sweg mid wynsumum sange gemengde. And se cyning self, and ealle 欠e Øær andwearde wæron, micelre stefne cleopedon and hine heredon. Efter סisum forlet Apollonius ס'a hearpan, and plegode, and fela $^{\text {F }}$
 and ungewunelic. And him eallum סearle licode ælc סæra欠inga ðe he tor'tteah.
16. 18. In the above passage change into the present tense all verbs that are in the past tense.
16. 19. What pagan and what Christian elements are to be found in AngloSaxon literature ?
16. 20. Trace the rise of modern standard English, and show how it still bears marks of its origin.

## LATIN.

## Lower Grade.

Monday, 25 th June. -10 A.M. to 12.30 p.m.
30.

## 1. For Prose Composition :-

> [Candidates should in all cases attempt this Question.]

Among the many battles which were fought there was none in which he did not signalise himself; twice he stopped the army in its flight, led them back to the charge, and gained the victory ; so that, next to Ceesar, he had the greatest reputation of any person in the army. And what opinion Cæsar himself had of him, plainly appeared at the last and decisive battle of Pharsalia. He led the right wing himself, and committed the charge of the left to Antony, as the best of all his officers. After the battle, Cæsar being created dictator, went in pursuit of Pompey, and sent Antony to Rome with the character of Master of the Horse.

## Value. 1010 Leaving certificate examination

2. Translate into English :-
3. (a) Perseus defeated, and the progress of Antiochus checked.

Is Perseum ingenti proelio apud urbem nomine Pydnam in Macedonia fusum fugatumque castris exuit deletisque eius copiis destitutum omni spe coegit e Macedonia profugere, quam ille linquens in insulam Samothraciam perfugit templique se religioni supplicem credidit. ad eum Cn. Octavius praetor, qui classi praeerat, pervenit et ratione magis quam vi persuasit ut se Romanorum fidei committeret. ita Paulus maximum nobilissimumque regem in triumpho duxit.

Per idem tempus, cum Antiochus Ptolemaeum puerum Alexandriae obsideret, missus est ad eum legatus M. Popilius Laenas, qui iuberet incepto desistere, mandataque exposuit et regem, deliberaturum se dicentem, circumscripsit virgula iussitque prius responsum reddere, quam egrederetur finito harenae circulo. sic cogitationem regiam Romana disiecit constantia oboeditumque est imperio.
(b) Orpheus recovers Eurydice, only to lose her again.

Inmites potuit flectere cantibus umbrarum dominos et prece supplici Orpheus, Eurydicen dum repetit suam. tandem mortis ait 'vincimur' arbiter,
'evade ad superos, lege tamen data:
tu post terga tui perge viri comes,
tu non ante tuam respice coniugem,
quam cum clara deos obtulerit dies,
Spartanique aderit ianua Taenari.'
odit verus amor nec patitur moras :
munus dum properat cernere, perdidit.
3. (a) In the following lines of verse mark the quantity of each syllable and divide the feet. Name the metres in which the lines are written.
35.
nunquam animam talem dextra hac (absiste moveri)
amittes : habitet tecum et sit pectore in isto.
hoc, quodcunque vides, hospes, qua maxima Roma est
ante Phrygem Aenean collis et herba fuit.
(b) Give (1) the meaning, (2) the gender, (3) the genitive singular, (4) the genitive plural of the following words:-bos, nox, gne., exercitus; and give the principal parts of seco, ardeo, misceo, fallo, ulciscor.
(c) Write down the comparative and superlative of tener, gravis, gracilis, utilis, senex, benevolus ; and mention the comparatives and superlatives from prope, ultra, extra.
(d) Write, and translate, short Latin sentences to illustrate the exact meaning of the following pairs of words:-unus, singuli - deni, decies-quidam, quilibet-omris, quisque-semel, simul.

## 4. Translate into Latin :-

(a) When you come back to Rome, I shall tell you what has happened.
(b) The king promised to spare my life, if I obeyed him.
(c) If you had acted otherwise, you would have been severely punished.
(d) So perish every one who shall leap over the walls of my city.
5. Give a short account of the career of any one of the following :Camillus, Scipio Africanus Major, Jugurtha, Pompeius Magnus, Agricola.

## LATIN.

Higher Grade.
Monday, 25 th June. -10 A.m. to 1 P.M.
Candidates will not be allowed to pass unless they reach the necessary standard both in Prose Composition and in Translation.
30. 1. For Latin Prose :-

Germanicus had calmed his mutinous soldiery, led them more than once into the heart of Germany, visited the battlefield where Varus fell, and brought back with him in triumph the captive wife and child of Arminius, the national hero of the Germans. It might seem dangerous to leave him longer at the head of an army so devoted to their general-dangerous perhaps to bring him back to win the hearts of men at Rome. But his presence might be useful in the East, for the kingdoms of Parthia and Armenia had bcen torn by civil wars and thrown into collision by the claims of rival candidates for power, and by wars of succession due in part at least to the intrigues of Rome. A general of high repute was needed to protect the frontier and appease the neighbouring powers. It was resolved to recall Germanicus and dispatch him to Syria on this important mission.
25.

## 2. Translate into English:-

(a) Carthagini cum prima collatio pecuniae diutino bello exhaustis difficilis videretur maestitiaque et fletus in curia esset, ridentem Hannibalem ferunt conspectum. cuius cum Hasdrubal Haedus risum increparet in publico fletu, cum ipse lacrimarum causa esset, "Si quem ad modum oris habitus cernitur oculis" inquit, "sic et animus intus cerni posset, facile vobis appareret, non laeti sed prope amentis malis cordis hunc, quem increpitas, risum esse. qui tamen nequaquam adeo est intempestivus quam vestrae istae absurdae atque abhorrentes lacrimae sunt: tunc flesse decuit, cum adempta sunt nobis arma, incensae naves, interdictum externis bellis : illo enim vulnere concidimus. nec est, cur vos otio vestro consultum ab Romanis credatis : nulla magna civitas quiescere potest: si foris hostem non habet, dori invenit, ut praevalida corpora ab externis causis tuta videntur, sed suis ipsa viribus onerantur.
(b) Evander parts from his son Pallas.
15.
" At vos, o superi, et divum tu maxime rector Iuppiter, Arcadii, quaeso, miserescite regis, et patrias audite preces : si numina vestra incolumem Pallanta mihi, si fata reservant, si visurus eum vivo et venturus in unum, vitam oro ; patiar quemvis durare laborem : sin aliquem infandum casum, Fortuna, minaris, nunc o nunc liceat crudelem abrumpere vitam, dum curae ambiguae, dum spes incerta futuri, dum te, care puer, mea sola et sera voluptas, complexu teneo; gravior ne nuntius aures vulneret," haec genitor digressu dicta supremo fundebat: famuli collapsum in tecta ferebant.
30. 3. (a) Translate the following sentences and account for the case of the words printed in italics:-
(i) cui non sunt auditae Demosthenis vigiliae ?
(ii) animo cupienti nihil satis festinatur.
(iii) res eodem est loci quo reliquisti.
(iv) C. Verrem insimulat avaritiae et audaciae.
(b) Scan the following lines, marking the quantity of every syllable, and dividing the feet. Give the name of the metre in each case :-
" nil satis est," inquit, " quit tanti quantum habeas sis."
et tollens vacuum plus nimio gloria verticem.
auream quisquis mediocritatem.
4. Translate into Latin :-
(a) If you play the man in this contest, I will put you in command of the army.
(b) Whether by chance or design, there can be no doubt that he did much harm to his own friends.
(c) Preferring safety to glory, and believing that any kind of peace was better than civil war, he betook himself to Rome.
(d) The tribune at once despatched a messenger to inform the general of the critical situation.
5. Arswer any one of the following:-
(a) Give some account of Rome's conflict with one of the following:-Pyrrhus, Antiochus, Mithradates.
(b) What were the chief measures passed by Sulla? How far was his legislation permanent in its results ?
(c) Describe the nature and aims of the coalition formed in 60 b.c. by Caesar, Pompeius and Crassus.
(d) Give a short history of Rome's dealings with either Parthia or Britain.
(e) Explain the following expressions:-intercessio, tribuni militares consulari potestate, princeps senatus, census equester, Feriae Latinae.

## LATIN.

## Honours.-First Paper.

Monday, 25 th June.-10 A.M to 1 P.M

## 1. For Latin Prose :-

On this return to Rome, Cæsar was drawn at once into closer connection with the man who during the next twenty years was to be his friend, his rival, and his enemy. Pompeius was by this time tired of a quiet life. He had been living in dignified retirement, rarely showing himself in the forum, and when he did so, surrounded with a train of friends, who screentd him from the eye and touch of the vulgar. By this means, says Plutarch, he contrived to keep up his reputation, which was purely military. At last, both to him and his friends, it seemed impossible to be idle any longer. There was real and abundant reason for the employment of the ablest soldier of the day. The audacity of the pirates was greater than ever. Lucullus too, in Asia, had begun to meet with disasters, and was unable, with his troops in a mutinous temper, to cope with the combined forces of the kings of Armenia and Pontus. To make arrangements for a campaign was constitutionally the business of the Senate; but the Senate was not likely to recall its faithful and able general, Lucullus, nor to give any single individual the exclusive powers necessary to enable him to act with success against the pirates. A bill was proposed by a tribune, Gabinius, in the assembly of the plebs, giving Pompeius the extensive power which he himself desired.
(a) Translate into Hexameters:-

Then loudly thus before the attentive bands He calls the gods and spreads his lifted hands :
" $O$ first and greatest power ! whom all obey ${ }_{\text {. }}$
Who high on Ida's holy mountain sway,
Eternal Jove ! and you bright orb that roll
From East to West, and view from pole to pole !
Thou Mother Earth ! and all ye living floods !
Infernal furies and Tartarean gods,
Who rule the dead and horrid woes prepare
For perjured kings and all who falsely swear !
Hear and be witness."
(b) Translate into Elegiacs:-

Me whom to land the pitying billow bore,
It stripped not of the humble dress I wore ;
But he who found me dead did not disdain Such great pollution for such little gain. May the filched garment cleave unto his shade, And Minos see him in my spoils arrayed!

## Value.

OR , as an alternative to verse composition,

## Write in Latin :-

An Essay or Dialogue on the character and action of the gods in the epics of Homer and Virgil ;

OR
A Funeral Speech or Laudatio over a member of the family of the Scipios, commemorating the achievements of his ancestors.


1. Translate into English :-
2. (a) CICERO S. D. CORNIFICIO COLLEGAE.

Grata mihi vehementer est memoria nostri tua quam significasti litteris; quam ut conserves, non quo de tua constantia dubitem, sed quia mos est ita rogandi, rogo. ex Syria nobis tumultuosiora quaedam nuntiata sunt, quae, quia tibi sunt propiora quam nobis, tua me causa magis movent quam mea. Romae summum otium est, sed ita, ut malis salubre aliquod et honestum negotium: quod spero fore; video id curae esse Caesari. me scito, dum tu absis, quasi occasionem quandam et licentiam nactum scribere audacius; et cetera quidem fortasse quae etiam tu concederes; sed proxime scripsi de optimo genere dicendi, in quo saepe suspicatus sum te a iudicio nostro, sic scilicet, ut doctum hominem ab non indocto, paulum dissidere : huic tu libro maxime velim ex animo, si minus, gratiae causa suffragere. dicam tuis ut eum, si velint, describant ad teque mittant ; puto enim, etiam si rem minus probabis, tamen in ista solitudine quidquid a ne profectum sit iucundum tibi fore. quod mihi existimationem tuam dignitatemque commendas, facis tu quidem omnium more, sed velim sic existimes me cum amori quem inter nos mutuum esse intellegam plurimum tribuere tum de summo ingenio et de studiis tuis optimis et de spe amplissimae dignitatis ita iudicare, ut neminem tibi anteponam, comparem paucos.
20.
(b) Iudicibus notis regimur fruimurque quietis militiaeque bonis, ceu bellatore Quirino ceu placido moderante Numa. non imminet ensis, nullae nobilium caedes, non crimina vulgo texuntur, patria maestus non truditur exul ; impia continui cessant augmenta tributi ; non infelices tabulae ; non hasta refixas vendit opes ; avida sector non voce citatur, nee tua privatis crescunt aeraria damnis. munificus largi, sed non et prodigus, auri.
perdurat non empta fides nec pectora merces adligat; ipsa suo pro pignore castra laborant; te miles nutritor amat. quae denique Romae cura tibi! quam fixa manet reverentia patrum! firmatur senium iuris priscamque resumunt canitiem leges emendanturque vetustae acceduntque novae. talem sensere Solonem res Pandioniae ; sic armipotens Lacedaemon despexit muros rigido munita Lycurgo.
20. (c.) Litterasque ad senatum misit, quarum summa erat repertum cum ferro percussorem Agerinum, ex intimis Agrippinae libertis, et luisse eam poenas conscientia qua scelus paravisset. adiciebat crimina longius repetita, quod consortium imperii iuraturasque in feminae verba praetorias cohortes idemque dedecus senatus et populi speravisset, ac, postquam frustra habita sit, infensa militi patribusque et plebi dissuasisset donativum et congiarium periculaque viris illustribus struxisset. quanto suo labore perpetratum, ne irrumperet curiam, ne gentibus externis responsa daret. temporum quoque Claudianorum obliqua insectatione cuncta eius dominationis flagitia in matrem transtulit, publica fortuna extinctam referens. namque et naufragium narrabat: quod fortuitum fuisse quis adeo hebes inveniretur ut crederet? aut a muliere naufraga missum cum telo unum qui cohortes et classes imperatoris perfringeret? crgo non iam Nero, cuius inmanitas omnium questus anteibat, sed Seneca adverso rumore erat, quod oratione tali confessionem scripsisset.
14. 2. Translate the following, with short notes on the construction of the words in italics :-
(a) (a) cratera antiquum, quem dat Sidonia Dido.
$(\beta)$ iuvenes . . . . quos educat Ufens.
(b) mobilis Aesonide vernaque incertior aura cur tua polliciti pondere verba carent?
(c) haud aliter caeco nocturni turbine Cori scit peritura ratis.
(d) assiduo ruptae lectore columnae.
(e) nihil ei longius videbatur quam dum illud videret argentum.
( $f$ ) vix erat hoe plane imperatum, cum illum spoliatum
stipatumque lictoribus videres.
(g) nec veni, nisi fata locum sedemque dedissent.
26. 3. Answer any tivo of the following :-
(a) Discuss the causes and motives of the murder of Julius Caesar, the political wisdom or folly of the act, and its inmediate consequences.
(b) Give some account of the acquisition and administration of any one of the following provinces :-Sicily, Achaia, Egypt, Britain.
(c) How and when did Rome become a naval power? Consider her naval efficiency in the Mediterranean under the Republic.

## Value. 1016 LEAVING CERTIFICATE EXAMINATION.

(d) Distinguish carefully populus and plebs, imperium and potestas, comitia and contio, illustrating each distinction by any regulations or varieties of procedure connected with it.
(e) Illustrate from Horace, Martial, and Juvenal, or other sources, the daily life of a resident in Rome.
$(f)$ Give the metrical scheme of any four metres used by Horace in the Odes, other than the Sapphic and Alcaeic, and quote, if you can, an example of each.
(g) To what extent was didactic poetry written at Rome? Give some account either of the Georgics or of Lucretius' poem De Rerum Natura; or give a briefer account of both and draw a contrast between them.

## GREEK.

## Lower Grade.

Friday, 23rd June.-2 to 4.30 P.M.
40. I. Translate :-

## The Society Jester.











 $\mu$ е́ тıs;
24.
II. Translate into Greek :-
(1) He said that he knew we were telling the truth.
(2) If you said that, no one would believe you.
(3) I did not think he would be able to tell us.
(4) Do not give that book to any one.
(5) I asked him whether his father was alive or not.
(6) They sent messengers to announce the victory.
[Give two renderings of (6), if you can.]
10. III. (a) Give-
gen. sing. of $\theta \dot{\alpha} \lambda a \tau \tau \alpha, \theta v \gamma \alpha ́ \tau \eta \rho$, ỏdov́s, $\chi \in i \rho, ~ к v ́ \omega \nu, \pi$, тov́s.


Parse-
$\pi \lambda \epsilon i ́ o v s, \dot{\omega} \sigma i, \quad \pi \epsilon \ell \theta o \hat{h}, v \epsilon \omega ́ s, \epsilon^{\prime} \gamma a v$.
Compare-

10. (b) Parse, giving lst sing. pres. ind. with active meaning:-



## Give-

aor. inf. with active meaning of $\dot{\tau} \pi о \mu \epsilon ́ v \omega$, каӨорш̂, $\bar{\epsilon} \mu \pi i \mu \pi: \eta \mu$, à $\nu \alpha \mu \mu \nu \dot{\prime} \sigma \kappa \omega$.
1st sing. perf. ind. act. of $\pi \epsilon_{i} \theta_{\omega}$, катаßá $\lambda \lambda \omega, \pi а р \epsilon ́ \chi \omega$, à $\pi о \sigma \tau$ е́ $\lambda \lambda \omega$.
3rd sing. fut. ind. with active meaning of $\pi i \nu \omega, \nu о \mu i \zeta \omega, \kappa \alpha \lambda \hat{\omega}$, áфinu.
16. (c) Distinguish in meaning between $\mu \in \tau^{\prime} \dot{\epsilon} \mu 0 \hat{v}, \mu \epsilon \tau^{\prime} \dot{\epsilon} \mu \epsilon ́: ~ v i \pi \epsilon \grave{\rho} \rho \hat{\eta} \mu \omega \hat{\omega}$, vinè $\hat{\imath} \mu \mu a ̂ s: ~ \pi \rho o ̀ s ~ \tau o u ́ t o \iota s, ~ \pi \rho o ̀ s ~ \tau a v ̂ \tau a . ~$
Translate, adding a note on the syntax :-





(6) Eit $\sigma \grave{v} \pi \alpha \rho \hat{\jmath} \sigma \theta a$, oủк âv $̇ ่ \tau o ́ \lambda \mu a ~ \tau a v ̂ \tau a ~ \lambda e ́ \gamma \epsilon \iota v . ~$

Give the Greek for-Come to me, do so, tell us, go with us, put it down, say nothing.

## GREEK.

Higher Grade.

$$
\text { Friday, 22nd June.-2 to } 5 \text { P.M. }
$$

(Candidates will not be allowed to pass unless they reach the necessary standard both in Grammar and in Translation.)
I. Translate:-

The value of oratory to statesmen.
20.



 9829.













20. II. Translate one of the following passages :-
(a) Hector accepts the challenge of Aciilles.















Scan the first four verses, noting any peculiarities of Homeric prosody.
(b) The messenger announces the arrival of Ipligenia and her mother at Aulis.



каì $\pi a i ̂ s ~ ' О \rho \epsilon ́ \sigma \tau \eta \varsigma, ~ \omega ̈ \sigma \tau \epsilon ~ \tau \epsilon \rho \phi \theta \epsilon i \eta s ~ i \delta \dot{́ v}$,




кn $\theta \in \hat{\epsilon} \mu \in \nu$ av̉rás, ès $\beta$ opâs $\gamma \in v \sigma a i a \tau o$.






Scan the first four verses, marking the cesura in each.

## III. For Greek Prose :-

25. Though well aware of the great danger we were in, we resolved to continne our march at daybreak. It was quite impossible for us to stay where we were; for all through the night we had heard the wild beasts close at hand in the forest. On the other hand, we thought it would no longer be safe for us to return to the village we had left the day before. The chief had, indeed, been friendly; but at that time he was still ignorant of our intentions. We decided, therefore, to make for the river which we had seen from the top of the hill. If we could cross it, we might be able to reach the coast before the natives started in our pursuit. Otherwise, we had no hope of escape.
 үсүขю́бкш.

3rd sing. fut. ind. with active meaning of $\sigma \kappa о \pi \hat{\omega}$, каӨор $\hat{\omega}$, vо $\mu i \zeta(\omega$, àтоктєі́レш.

Parse, giving lst sing. pres. ind, act., ка $\theta \epsilon \sigma \tau \alpha ́ v a \iota, ~ ข ์ \pi о \sigma \chi o ́ \mu \epsilon \nu о \varsigma, ~ \grave{\epsilon} \xi \in \lambda \hat{\alpha}$, бv́$\gamma \gamma \nu \omega \theta \iota, \sigma \nu v \in \rho \rho \nu \eta \kappa$ ќval.
10. (2) Translate, adding a note on the syntax :-





(3) Translate into Greek :-
(a) Do not tell anyone where I have gone.
(b) If I had thought that he was absent, I should not have come.
(c) Ask the boy whether he is older than his brother.
(d) It you see my father, tell him that I am ill.
(e) As soon as the enemy saw us they ran away.
(4) (a) What is the difference of meaning between $\dot{\omega} \sigma \tau \epsilon \dot{\epsilon} \lambda \theta \epsilon \hat{\epsilon} \nu$ and

(b) When can you use the suhjunctive in an imperative sense like the Latin dicamus, dicant?

> GREEK.
> Honours.-FIRst PapEr,
> Friday, 22nd June. -2 to 5 P.m,
I. Translate :-
(1) The shade of Patroclus addresses Achilles.
20.
9829.


 ov̉ $\mu \in ́ v ~ \mu \epsilon v ~ \zeta \omega ́ o v t o s ~ a ̀ k \eta ́ \delta \iota \epsilon \iota s, ~ a ̉ \lambda \lambda a ̀ ~ \theta a v o ́ v t o s . ~ ' ~$











(2) Theseus seeks to arouse Herakles from his despuir.










 $\sigma v \mu \pi \lambda \epsilon i ̂ v ~ \delta \grave{~ r o u ̂ s ~ \phi i ́ \lambda o \iota \sigma ı ~ \delta v a \tau v \chi o v ̂ \sigma \iota v ~ o v ̉ . ~}$






$\Theta H . ~ \tau i ́ \delta \delta^{\prime}$ ov゙; $\mu$ taívets $\theta v \eta \tau o ̀ s ~ \omega ̀ v ~ \tau a ̀ ~ \tau \hat{\omega} \nu ~ \theta \epsilon \omega ̂ \nu ; ~$



## II. For Greek Prose :

In the morning before the battle, as always upon action, he was very cheerful, and put himself into the first rank of the Lord Byron's regiment, then advancing upon the enemy, who had lined the hedges apon both sides with musketeers; from whence he was shot with a musket in the lower part of his belly, and in the instant falling from his horse, his body was not found till the next morning ; till when there was some hope he might have been a prisoner, though his nearest friends, who knew his temper, received small comfort from that imagination. Thus fell that incomparable young man in the four-andthirtieth year of his age, having so much despatched the true business of life that the eldest rarely attain to that immense knowledge, and the youngest enter not into the world with more innocency. Whosoever leads such a life, needs be the less anxious upon how short warning it is taken from him.

Clarendon.

## GREEK.

## Honours-Second Paper.

Thursday, 28th June.- -2 to 5 P.m.

## I. Translate :-





































11. Translate, with notes on the syntax :-





(6) Tí $\frac{\epsilon}{\mu} \pi o \delta \dot{\omega} \nu \mu \grave{\eta}$ ov̉xì à $\pi o \theta a v \epsilon i v ;$

Give the meaning of the following words in Tragedy with their equivalents in Attic prose:-
 ка́рта, ठо́доя, єїтঠ́́ркодаи.

Distinguish in meaning the following pairs of phrases:-
aiซðúvo

Distinguish according to their accent:-


Give the derivation of the following English words, noting any difference between the Greek originals and the derivatives:-
litany, liturgy, anodyne, heresy, policy, patriot.
20. III. Answer any two of the following questions:-
(1) In what sense may the Epic dialect be called artificial ?
(2) What are the chief differences between Ancient and Modern Tragedy ?
(3) State what you know of any of the following:-

Archilochus, Ibycus, Bacchylides, Isocrates, Apollonius Rhodius.
(4) Illustrate the importance of sea-power from Greek history.
(5) Write notes upon the following:-


FRENCH.

## Lower Grade.

Friday, 22nd June.-10 A.m. to 12.30 P.M.
To secure full marks, the whole of this Paper should be answered. The greatest possible attention should be paid to correctness of style both in French and in English.

1. Translate into French :-

After dinner, Mrs. Merton filled a glass of wine, and bade Harry
30. drink it up; but he thanked her, and said he was not thirsty. "But, my dear," said she, "this is very sweet and pleasant." "Ay, but, madam, Mr. Barlow says that we should eat only when we are hungry, and drink only when we are thirsty."
"This little man is a great philosopher," said Mr. Merton, " and we should be much obliged to Mr. Barlow if he would take our Tommy under his care,* for he grows a great boy, and it is time that he should

[^2]know something. What say you, Tommy, should you like to be a philosopher ?"
"Indeed, papa, I don't know what a philosopher is ; but I should like to be a king, hecause he's finer and richer than anybody else, and has nothing to do, and everyone waits upon him,* and is afraid of him."
"Well said, my dear," replied Mrs. Merton ; " and a king you deserve to be."
2. Translate into idiomatic English :-
(a) À Mademoiselle Laure de Bulzac.

Paris, 12 avril 1819.
Tu veux, ma chère sceur, des détails sur mon installation et ma manière de vivre, en voici !

J'ai répondu à maman elle-même sur les achats ; mais . . . j'ai pris un domestique !
-Un domestique! Y penses-tu, mon frère?
Oui, un domestique. Il a un nom aussi drôle que celui du docteur Nacquart: le sien s'appelle Iranquille; le mien s'appelle Moi-même. Moi-même est paresseux, maladroit, imprévoyant. Son naître a faim, a soif : il n'a quelquefois ni pain ni eau à lui offrir ; il ne sait pas même le garantir contre le vent, qui souffle à travers la porte et la fenêtre comme Tulon dans sa flûte, mais moins agréablement.

Dès que je suis éveillé, je sonne Moi-même, et il fait mon lit. Il se met à balayer et n'est guère adroit dans cet exercice.
-Moi-même !
-Plait-il, monsieur ?
-Regardez cette poussière sur les vitres qui m'aveugle!
-Mais, monsieur, je ne vois pas . . . .
-Allons, taisons-nous !
Et il se tait.
Il bat mes habits, balaye en chantant, chante en balayant, rit en causant, cause en riant. C'est un bon garçon. Il a mis mon linge en ordre dans l'armoire et il a peint en blane la chambre.
10.
(b) Écolier, qui pars pour l'école,

Garde-toi de traîner le pas ;
En chemin ne t'amuse pas.
Mais songe à l'heure qui s'envole.
Pour ton modèle et ton symbole,
Si tu m'en crois, tu choisiras,
Non pas le papillon frivole,
Trop ami des joyeux ébats, $\uparrow$
Mais l'abeille toujours pressée
Qui butine $\ddagger$ dans la rosée
Toutes les fleurs riches en miel.

> * Waits upon him: le sert.
> + ebats: sports.
> $\ddagger$ butiner: to despoil.
20. 3. Write from memory a French version of the passage read out.
10. 4. Translate into French :-
(1) I hope it will not rain to-morrow. I want to do something very important, and, if it rained, I could not do it.
(2) Why didn't you learn your lesson last night ? I did learn it, sir, but I can't remember it.
5. Répondez, en français, en quelques lignes, aux questions suivantes:
(1) Qu'est-ce qu'un jardin ?
(2) Pourquoi aimez-vous l'école?
(3) Que faites-vous le samedi?

## FRENCH.

## Lower Grade.

$$
\text { Friday, } 22 \text { nd June.--10.45 A.m. }
$$

This Paper must not be seen by any Candidate.
To be read out twice by the Supervising Officer (or a Teacher) at 10.45 A.M. The substance of this story is to be reproduced by the Candidates in French from memory. No notes may be made while it is being read.

Before commencing to read it, the Supervising Officer must write upon the blackboard the title of the story in French as follows: "Les souris et le chat: qui attachera le grelot ?" He should also write: to outwit $=$ jouer, or duper : to make off $=$ se sauver : to clap hands (or paws) $=$ applaudir. He must also warn the Candidates that they are not to aim at reproducing the passage in all its details, and in the same words or order of words us the original. What is desired is that they should attempt to relate the story in French, in their own way. Importance is attached to grammatical correctness, and full credit will be given for idiomatic phraseology.
Long ago, in a town far far away the mice held a meeting to find out some means of outwitting their common enemy, the cat.

They all knew that, but for cats, mice would be happy all day long and all night too : they would have all the cheese and all the bread and all the nice things mice are so fond of, without any fear of being caught, killed and eaten by the monster they all hated.

At the meeting one mouse said this and another said that, and I fear they all wanted to speak at once, till a very little mouse with a very long tail and a very big voice got up on his hind legs and spoke thus, "Ladies and gentlemen, the thing is done. You all know why we are afraid of the cat: we never know when he is near, he walks so quietly and never makes a sound. If we could have some signal of
his approach all would be well. I venture to think, ladies and gentlemen, that we should buy a nice little bell, and hang it round the cat's neck. In this way we shall know when he is about and we shall be able to make off before it is too late."

They all clapped their paws and said there never had been such a clever and eloquent mouse.

But their joy did not last long for an old mouse got up and said "My young friends, that is all very well, but who is to bell the cat ?"

## FRENCH.

## Higher Grade.

Friday, 22nd June.-10 A.M. to 1 P.M.
To secure full marks, the whole of this Paper should be answered.
30.
I. Traduire très soigneusement en français :-

## My Dear Catherine,

I have charming news for you, and if I had not sent off my letter this morning, I might have spared you the vexation of knowing of Reginald's being gone to London, for he is returned. Reginald is returned, not to ask our consent to his marrying Lady Susan, but to tell us they are parted for ever. He has been only an hour in the house, and I have not been able to learn particulars, for he is so very low that I have not the heart to ask questions. This is the most joyful hour he has ever given us since the day of his birth. Nothing is wanting but to have you here to share our joy, and we are very anxious that you should come as soon as you can. You have owed us a visit many long weeks; I hope nothing will make it inconvenient to Mr. Vernon ; and of course do not fail to bring my grandchildren and your dear niece too,-I long to see her.

Your affectionate mother,
C. de Courcy.
II. Traduire en bon anglais :
(a)

L'hiver en Suk̀de.
Ce qui m'avait vraiment ému pendant ce voyage, ce que je voudrais pouvoir dépeindre, c'est l'aspect de l'hiver dans ces contrées septentrionales, c'est l'aspect de la Suède, que j'avais vue, au mois de juin, riante et couverte de fleurs, comme une fiancée en habits de noces, et que je retrouvais, au mois de janvier, comme une veuve avec ses vêtements de deuil.

Le long des côtes, le sol est sec et durci, l'hiver est tempéré par le voisinage de la mer ; mais quand on arrive dans l'interieur du pays, on n'aperçoit plus que les lacs couverts de glace, les grandes plaines
chargées de neige ; de distance en distance, quelques tiges solitaires d'arbres, qui penchent vers le sol leurs branches, et les forêts de sapin qui entourent de leur ceinture noire les campagnes toutes blanches. L'air est d'une pureté sans égale, mais le ciel est sombre ; le soleil laisse a peine entrevoir, vers midi, quelques rayons fugitifs.

## Valère.

Calmons le désespoir où la fureur me livre.
Approche ce fauteuil . . . Va me chercher un livre.
Hector.
Quel livre voulez-vous lire en votre chagrin?
Valère.
Celui qui te viendra le premier sous la main ; Il m'importe peu; prends dans ma bibliothèque.

Hector sort, et revzent tenant un livre.
Voilà Sénèque.
Valère,
Lis.
Hector.
Que je lise Sénèque?
Valère.
Oui ; ne sais tu pas lire?
Hector.
Hé! vous n'y pensez pas :
Je n'ai lu de mes jours que dans les almanachs
Valère.
Ouvre et lis au hasard.
Hector.
Je vais le mettre en pièces.

> Valere.

Lis done.

## Hector lit.

Chapitre six. Du mépris des richesses.
"La fortune offre aux yeux des brillants mensongers.
Tous les biens d’ici-bas sont faux et passagers;
Leur possession trouble, et leur perte est légère :
Le sage gagne assez, quand il peut s'en défaire."
Lorsque Sénèque fit ce chapitre éloquent,
Il avait, comme vous, perdu tout son argent.
15. III. Traduire, très correctement, en français :
(1) I could not get to sleep last night for the wind.
(2) I could not help laughing at him, he looked so funny in his costume.
(3) I hastened to tell him the good news of his appointment.
(4) I wish you would write that letter without delay.
(5) I have heard you say that you liked this picture, and I shall have it photographed for you.
20.
IV. Narration française.

Traiter, en une ou deux pages, l'un des sujets suivants :
(a) Décrire en français une soirée passée en famille. Faire d'abord la description de la salle où sont réunis le père, la mère et les enfants, indiquer ensuite ce que fait chacun d'eux, et dire enfin quelle impression fait sur vous ce spectacle.
ou (b) Le chien du pauvre. Un pauvre, sans famille, n'a d'autre ami que son chien. Attachement du chien pour son maître. Il le suit partout, partage sa misère, le défend et le caresse. Un riche offre de l'or au pauvre en échange de son chien. Réponse du pauvre.

## FRENCH.

## Honours First Paper.

Friday, 22 nd June. -10 A.M. to 1 P.m.
[The utmost possible attention should be paid to correctness of styie.]
I. Traduire très soigneusement en français:

It is extraordinary how many of Molière's plays were imitated or adapted on the English stage during his life-time or very shortly after the close of it. The English playwrights, however, had no real appreciation of Molière, though they stole from him so freely. The poetess Mrs. Aphra Beha, being accused in 1678 of borrowing scenes from the "Malad Imagenere" (as she called it), admitted frankly that she had done so, but "infinitely to Molcer's advantage."

The poetry of France in the third quarter of the seventeenth century is pre-eminently characteristic of a grave and polished system of society. The age of Racine was, and could not but be, an age of extreme refinement. It was useless for the crude contemporary dramatists of London to take the substance of the Parisian masterpieces, since their spirit absolutely evaded them. English society under Charles II. had elements of force and intellectual curiosity, but it lacked exactly what Paris possessed--the ornament of polished, simple, and pure taste. In the jargon of the time Racine and Molière were "correct," while even English poets of genius, such as Dryden and Otway, hardly knew that "correctness" existed. Hence Boilean, in whom "correctness" took the form of a doctrinal system, made no impression at all upon the English poetry of his own time.
II. Composition française :-

Traiter l'un des sujets suivants:
(a) Expliquer et développer ces paroles de Renan :-"La patrie est un composé de corps et d'âme. L'âme, ce sont les souvenirs, les usages, les légendes, les malheurs, les espérances, les regrets communs; le corps, c'est le sol, la race, la langue, les montagnes, les fleuves, les productions caractéristiques."
(b) On a dit que la comédie est un miroir grossissant. Dites ce que vous pensez de cette définition et donnez des exemples à l'appui de votre jugement, tirés du théâtre français, et surtont du théâtre de Molière.
(c) Eerire une lettre à votre père pour lui annoncer que vous venez de choisir une vocation et lui expliquer les raisons de votre choix.

## FRENCH.

## Honours-second Paper.

Thursday, 28 th June.-10 A.M. to 1 P.M.
1 Traduire on anglais :-
30.
(a)

Shelley
On connaît l'étrange créature à figure de fille, désordonnée, idéaliste, toujours envolée à mille lieues de l'heure présente, dédaigneuse et ignorante du réel, imaginative jusqu'à l'hallucination. On connaît son long corps frêle et sa petite tête ronde, sa face lisse, imberbe, au teint de neige, angélique, ses larges yeux presque toujours perdus dans une contemplation si sérieuse, attentive, épuisante,-ses lèvres entr'ouvertes par la rêverie, toute cette physionomie de candeur et de suavité qui rappelle les vierges immobiles de Burne Jones, lumineuse et pâle dans les ondes légerè d'une chevelure de soie. On sait sa beauté et ses allures surnaturelles, ses brusques accès d'exaltation, sa voix discordante alors, suraiguè, le débit fiévreux de sa parole, ses yeux, si vagues d'ordinaire, devenussoudain étincelantset fixes. Les biographes anglais nous ont montré par le détail ces gestes sinueux, cette dèmarche sans bruit, glissante, qui le faisait appeler par ses amis le Serpent, ces façons mystérieuses d'apparaître dans une chambre et de disparaître sans qu'on l'ait vu entrer ni sortir, et ces contrastes bizarres : ces faux pas en marchant sur le tapis d'un salon et cette agilité à se faufiler dans la rue à travers la foule, sans heurter personne, les yeux sur un livre, serrant sous son bras un pain dont il arrachait fiévreusement de petits morceaux, sa seule nourriture pendant plusieurs années.
20.

## (b)

## La mort d'un chềne.

Quand l'homme te frappa de sa lâche cognée, O roi qu'hier le mont portait avec orgueil, Mon âme, au premier coup, retentit indignée, Et dans la forêt sainte il se fit un grand deuil.
Un murmure éclata sous ses ombres paisibles; J'entendis des sanglots et des bruits menaçants ; Je vis errer des bois les hôtes invisibles, Pour te défendre, hélas! contre l'homme impuissants.
Tout un peuple effrayé partit de ton feuillage,
Et mille oiseaux chanteurs, troubles daus leurs amours,
Planèrent sur tou front comme un pâle nuage,
Perçant de cris aigus tes gémissements sourds.

Le flot triste hésita dans l'urne des fontaines ;
Le haut du mont trembla sous les pin chancelants,
Et l'aquilon roula dans les gorges lointaines
L'écho des grands soupirs arrachés à tes flancs.
20. 2. (a) Expliquez en français, le sens des expressions soulignées dans le passage suivant, et faites à leur sujet les remarques grammaticales que vous jugerez à propos.
5. (b) Signalez les rimes riches et seandez les vers 1, 2, 9, 12, 23.

## Flaminius.

Sur le point de partir, Rome, Seigneur, me mande
Que je vous fasse encor pour elle une demande.
Elle a nourri vingt ansun prince votre fils ;
Et vous pouvez juger les soins qu'elle en a pris
5. Par les hautes vertus et les illustres marques

Qui font briller on lui le sang de vos monarques.
Surtout il est instruit en l'art de bien régner:
C'est à vous de le croire, et de le témoigner.
Si vous faites état de cette nourriture,
10. Donnez ordre quill règne : elle vous en conjure ;

Et vous offenseriez l'estime qu'elle en fait
Si vous le laissiez vivre et mourir en sujet.
Faites donc aujourd'hui que je lui puisse dire
Où vous lui destinez un souverain empire.
Prusias.
15. Les soins qu'ont pris de lui le peuple et le sénat

Ne trouveront en moi jamais un père ingrat:
Je crois que pour régner il en a les mérites,
Et n'en veux point douter après ce que vous dites ;
Mais vous voyez, Seigneur, le Prince son aîné,
20. Lont le bras généreux trois fois m'a couronné ;

In ne fait que sortir encor d'une victoire,
Et pour tant de hauts faits je lui dois quelque gloire
Souffrez qu'il ait l'honneur de répondre pour moi.
Nicomède.
Seigneur, c'est à vous seul de faire Attale roi.

## Prusias.

25. C'est votre intérêt seul que sa demande touche.

## COMMERCIAL FRENCH.

> Wednesday, 27 th June.-2 to 3.30 p.m.
> The whole of this Paper should be answered.

1. Translate into English:-

Paris, le 12 Octobre 1904.

## Messieurs Bordet Frères,

Besançon.
Nous avons l'honneur de vous prévenir que, suivant la commande que vous avez bien voulu nous donner le 15 Septembre dernier, nous venons de vous adresser, par l'entremise de M. Henri Laffitte de cette ville :-
L.A. 338. 1 caisse de quincaillerie poids brut, 84 kilos. " 337. 1 " d'ustensiles de mínage, poids brut, 66 kilos.
Nous vous remettons, sous ce pli, facture de cet envoi, au montant de Frs. 936,50.

Veuillez nous en créditer, valeur en notre traite, au 30 Novembre prochain.

Si un autre mode de paiement vous convenait mieux, veuillez nous le faire savoir dans la huitaine. Nous nous empresserous de nous conformer à vos désirs.

Veuillez agréer, Messieurs, nos civilités empressées.
Manufacture d'ustensiles de ménage,
Le Directeur-Gerant,
A. Richard.
35. 2. Write in French a letter to a firm in Havre saying that you are engaged in the coal-trade in Glasgow, and are desirous of doing an export business in coals with the French ports. Ask them to inform you what are the prospects for Scotch coal in France, whether they would undertake to act as your agents and, if so, upon what conditions.
3. Mention briefly in French the principal industries carried on in the following places :-Lyons, Bordeunx, Roubaix, Brussels.

## Either-

4. Translate the following market report :-

Huile de Lin.-Soutenue et en reprise de 25 centimes. On cote courant 45 à 4525 , avril 4525 à 4575 , mai 47,4 .

Spiritueux.-Marché soutenu avec peu d'affaires ; hausse de 25 centimes pour les mois rapprochés. Après Bourse, on cote disponible 3875 à 3925 , courant 3925 acheteurs, avril $39 \quad 25$ acheteurs.

Sucres.-Tendance ferme, mais plus calme en clôture ; hausse de 12 centimes. Bon courant d'affaires; la fermeté est due a de nouveaux et importants achats ou rachats sur le courant. Après Bourse on cote courant 25 vendeurs, avril 2512 acheteurs. Le stock a diminué de 10,746 sacs contre 6,299 en 1905.

Pétrole．－Courant régulier d＇affaires aux prix antérieurs； pour marchandise disp．et sur liv．mai，on a payé frs． 22 à 24 ， suivant qualité．Le marché clôture on tendance plus ferme et on cote en entrepôt，disp．，frs． 23 ；sur liv．mai，frs． 24.
Or（instead of Question 4）—
5．（a）Translate into English the following sentences ：－
（1）On va former une société pour l＇exploitation des mines de cuivre de ce pays．
（2）Notre marque de fabrique est déposée on France aussi bien qu＇en Angleterre：
（3）On nous prie de remettre la somme en papier court sur l＇Allemagne．
（4）Il faut ajouter $2 \%$ pour le ducroire．
（b）Translate into French ：－
（1）The wool shipments are now over for the season．
（2）You must send in a statement of your claim to the under－ writers．
（3）The steamer has just cleared outwards．
（4）The receipts must be made out in duplicate．

## GERMAN．

## Lower Grade．

Monday，25th June．－2 to 4.30 P．m．
To secure full marks，the whole of this Paper should be answered，and the German script used，at least in the passage for composition， 2 （b．）．
18.

1．Translate into English ：－
（a．）Frau 刃arthas Şaus in ©djattenborf batte ein bobes，graues Dadi）und fat etrwas finfter aus；benn babinter ftanben bidite $\mathfrak{K a n n e n , ~ b i e ~ e i n e n ~ t i e f e n ~ © ~}$ datten in die ©tuben warfer．Ueber bie $\mathfrak{F a}$ ume bimweg fah man auch $\mathfrak{B e r g e}$ ，bebectt mit $\mathfrak{F}$ zato und Gelien，bie baÉ gange Dorf befdatteten．Nur am פittag blicte bie Somne furz：
 wûniden，aber bann mufte fie ibnen audi）gleid wieber \＆ebewobl fagen．Uno dennoch
 Badheb，und jebeb §aub batte feine fette，grûne æ乃iefe unb einen ©atten，in bem atterlici

 unt bre S̃aben geigten beim \＆aden igte weifen 3 äthe．Das ©duthaus war nur Plein， aber eb hatte einen guten alten £ebrer，Der nie סie 刃ute（cane）in bie §ano zu nebmen braubte．Wुar ein Sind cinmal nidt fleifig ober aufmertiam gemefen，io tupfte er ibm
 ab，bis es $\mathfrak{B a t e r}$ und かutter gefehen baben！＂2rber auf dem 5eimmeg rieben Finabett und ミäbden einanber ben weifen grect ab．Nibt wabr，ou uno id bátten eद̄ ald getan，benn wor lä́pt fid gern fein（Sefid）t befdmuķen？Und in ©djattenborf war man von Elein auf an Feinlidfeeis nowobnt．
（b．）$\quad$ In tiefem ©dimerze ritt bahin

## Der folze ゆelo ゆaralo；

Err ritt allein im Mronbeniderin Mobl Durd ben meiten अalb．
Bom gelifen rauidt es friidh uno elar， Ere fpringt vom Roffie \｛dnnell， Er nimmt vom §aupte fíd ben ⿹etm und tringt vom fủblen §uell．
Ded wie er faum ben Durft geftillt，
（frlahmt ibm 2 rm unt Bein；
（Ex mū́（fid）fegen auf den శ̌ele；
Er nidtt und fdlummert ein．
（Ex fotummert auf bempelben ©tein
©don mande bunbert ${ }^{\text {Sabr＇，}}$
Das §aupt gefentet auf bie $\mathfrak{B r u f t}$ ， Mit grauem ßart unb ફaar．
Bann Blize zucten，Donner rollt，
Wるann ©turm erbrauft im æalb， Dann greift er trāumeno nad ben Gdroert， Der alte 5eld 5arald．
（c．）Write out，from memory，a German version of the passage read 15．out．
（b．）Translate into German（using the familiar forms of the second personal pronoun，＂thou，＂＂thee，＂＂thine＂）：－

My dear William，why do you not write？You have already received two long letters from me，and we have not had a word from you since you left us．It is really too bad of you．My sister Mary says， you must be ill；but I don＇t believe it，for I know you hate writing letters，and that is the only reason why we do not hear from you．If you were not well，your grandmother would have sent us word （ Fadridt）．Read my letters again，and you will find that I wish to hear your opinion on（über）several things．I shall have an answer before the end of the week，or you have no heart in your breast．I have nothing more to say，except that we have bought a large，new dog－ you never saw a finer animal－and that the old gardener John is dead． The poor man died quite suddenly，－no wonder，for he was over ninety． Your loving friend Frederick White．

3．Give the German for：－for what？on what？for whose sake？on account of this；in spite of it；what o＇clock is it？it is half past five； the day before yesterday；the day after to－morrow；this day week．

4．Translate into German ：－
15.
（a．）Charles was playing in（say，on）the street with other children when a stone fell on his foot．
（b．）During my whole life I shall not forget how kind you have been to me．
（c．）The table is already full of books；put yours on the chair， or keep（behalten）it in your hand．
（d．）If you don＇t come soon，you will find no one in the house except the maid－servant．
（e．）Spring begins on the twenty－first March，but it often is colder at that（say，at the）time than at Christmas．

## GERMAN.

Lower Grade.

$$
\text { Monday, } 25 \text { th June. }-2.45 \text { P.M. }
$$

This Paper must not be seen by any Candidate.
I'o be read out twice by the Supervising Officer (or a Tencher) at 2.45 P.M. The substance of this story is to be reproduced by the candidates in German from memory. No notes may be made while it is being read.
Before it is actually read, the Supervising Officer should explain that candidates are not to aim at reproducing the passage in all its details, and in the same words or order of words as the original. They should attempt to tell the story in German in their own way. Grammatical accuracy is considered very important, and special value is attached to anything that shows a knowledge of idiomatic German.
A gentleman was looking out of his window. As the day was very hot, he had taken off his coat. A servant entered the room, and thought it was the cook. Coming up softly behind him, he gave him a violent slap on the back. The gentleman turned at once round, and when the fellow saw his master's face, he cried out in great fear, "Oh, sir! I thought it was George." "And even if it were George," said the kindly gentleman, "surely you need not strike quite so hard."

## GERMAN.

Higher Grade.

$$
\text { Monday, } 25 \text { th June. }-2 \text { to } 5 \text { p.м. }
$$

The whole of this Paper should be answered, and the German soript used at least in the passage for translation into German, 2 (b).

1. Ueberiegen ©ie iné ©nglíde:-
(a.) Sehniühtig i申haute $\mathfrak{F i z a l l t r a b e ~ v o m ~ \nwarrow u r m e ~ h e r a b ~ i n ~ b e n ~ e n g e n ~} \mathfrak{B u r g h o f , \text { wo bie }}$
 Fie alteg, was fie befaß, darum gegeben baben, eins berietben zur fludt befteigen ou
 Surgberr mit feinen (Sefäbrten aus ber \$forte. Shre Steibung verriet, Daß fie feinen $\mathfrak{B e r g n u ̈ g u n g e r i t t ~ v o r b a t t e n . ~ S e r w a f n e t ~ b i z ~ a n ~ d i e ~} \mathfrak{Z}$ anne ftiegen fie zu $\mathfrak{P}$ ferbe, wintten ber §ausfrau, bie bem fheibenben (̧atten nod) bie §ant burds (sitter reidte, ein



 nidt an ben Gaum Des $\mathfrak{x}$ annenmalbes getangt, ais in ber $\$$ Burg foton mieber eine Ruhe
 ©dritte Die इurmtreppe berauf, uno ber zeitweilige ©dirmoogt bes ©dlofies fant
 2ugenblite betleidete, fprad aus feiner ईaltung und feinen sägen.

9829

VALUE． 1034 LEAVING CERTIFICATE EXAMINATION．
 Gefangene befindet．＂
＂Sie id）aut bier aus nad）bem Fluge ber freien \＆erden，＂entgegnete bie 2 ngerebete ebenfalle tächetnd，，und fann es nidt begreifen，wie fid）bie bolden Sänger biefem finftern ふurm nähern mögen，in bem bie תunedulidaft weint．＂

Spatberbft．
Die velten Blätter fallen von ben abeigen， $\mathfrak{B e r f t u m n t}$ ift nun ber $\mathfrak{B O g}$ get munt＇rer Chor；
12. Rein frober Eang erfreut beb פMeniden Dhr，
Fingsum in $\mathfrak{B a l}$ und Flur berríht tiefer Sdyveigen．
Wुent graue Nebet aus ben ふälern fteigen，
und Wotkin sieh＇n am Firmament cmpor，－ Beridywuben ift ber bunte Blumenfor， Wenni legte Mofen ibre säupter neigen； Jann fint vorbei bes Sommeré heitre Nage， Der Winter nabt twie eine ftille silage， Uno $\mathfrak{B}_{2}$ ebmut（d）leid）t fid leis in meine $\mathfrak{B r u f t}$ ． Sun Eomm＇，Exiun＇rung，lâ mid beimlid träumen Son ¿iebe，ßBtütenouit uno grủnen $\mathfrak{B a ̈ u m e n , ~}$ Won Radtigallenidtag und Eenjestuft．
2．（a．）Erweitern Sie bie fotgenbe Sfizze zu einer volftānoigen Eleinen （sefdid）te：－
15．Village－great doings－rich marriage－bells pealing－guests and presents－dancing and feasting－old poet comes，with nothing but little song－marriage couple，guests，and presents long since gone and for－ gotten－song still liviug．
（b．）Ueberfesen Sie inる Deutid）：－
A gentleman went one day for a drive with his wife，who was noted for her bad temper．On the way they met a heavy waggon，and as the road was rather narrow at that spot，their coachman had some difficulty in getting past．The lady seemed to think that the carter did not get quick enough out of their way，and began to scold him pretty rudely．But just as they were clear（say，free）of each other， the man stepped up to the carriage，and，politely touching his cap，asked the gentleman whether he might say a word．The lady，expecting that he wanted to beg pardon for his slowness，answered at once very sharply，＂Yes，certainly，say what you have got to say．＂Whereupon the man，taking no notice of her remark，but looking straight at the gentleman，said quietly，＂Sir，I pity＇ee from the bottom of my heart， for I＇ve just another such old shrew at home．＂

3．In ibiomatifdes Deutid $\boldsymbol{z}^{\prime}$ überfegen：－he ought to have been here；
5．they had him hanged；he says he has not seen the man；I had better go at once；he is said to be very rich．

4．Beben Sis auf beutic）bie folgenten \＆ändernamen mit ben zugehörigen Wbjeftiven und ben Botfenamen mit bem unbeftimmten Xrtifel（z．B．©englanb，englitid， ein（Englänber）：－France，Switzerland，Italy，Scotland，China．

5．Heberjesen Cie ins Deutide：
（a）I have often warned him，but it seems as if he would never become reasonable．
(b) There remains much to be done before we can say that all danger is past.
(c) If you like, I will introduce you to a friend of mine who knows something about this matter.
(d) If he had come to me a fortnight ago, it would not have been too late to do this.
(e) Why don't you do as other people do, instead of always going your own way?

## GERMAN.

> Honours.-First Paper.

Monday, 25 th June. - 2 to 5 P.M.
The whole of this Paper should be answered, and the German script used, at least in the passage for composition, 1.

It is a truth universally acknowledged that a single man in posses sion of a good fortune must be in want of a wife. However little known the feelings or views of such a man may be on his first entering a neighbourhood, this truth is so well fixed in the minds of the surrounding families that he is considered as the rightful property of some one or other of their daughters.
"My dear Mr. Bennet," said his lady to him one day, " have you heard that Netherfield Park is let at last ?" Mr. Bennet replied that he had not.
"But it is," returned she ; "for Mrs. Long has just been here, and she told me all about it." Mr. Bennet made no answer.
"Do you not want to know who has taken it ?" cried his wife impatiently.
"You want to tell me, and I have no objection to hearing it."
This was invitation enough.
"Why, my dear, you must know, Mrs. Long says that Netherfield is taken by a young man of large fortune from the North of England; that he came down on Monday in a chaise and four to see the place, and was so much delighted with it that he agreed with Mr. Norris immediately ; that he is to take possession before Michaelmas, and some of his servants are to be in the house by the end of next week."
"What is his name?" "Bingley." "Is he married or single?"
"Oh! single, my dear, to be sure! A single man of large fortune-four or five thousand a year. What a fine thing for our girls !"
" How so ? how can it affect them ?"
" My dear Mr. Bennet," replied his wife, "how can you be so tiresome ! You must know that I am thinking of his marrying one of them "

## Value. 1036 LEAVING CERTIFICATE EXAMINATION


(a.) Bute ßüder find gute §reunbe.
(b.) Æin Boltsfeit.
(c.) $\mathcal{X n}_{\mathrm{n}} \mathfrak{B}$ Baterland, ant teure, 他tieß did) an, DaË balte foft mit beinem ganzen §erzen:


## GERMAN

> Honours.-Second Paper.

$$
\text { Thursday, 28th June.--2 to } 5 \text { P.M. }
$$

The whole of this Paper should be answered.
(a.) Der Wunid meines vaterliden $\mathfrak{Z r e u n b e E}$ ift langft in ©rfülung gegangen: id babe im Urbeitstaufe arbeiten gelernt. Die $\mathcal{U r b e i t}$ if mir eine $\Re$ Potwenbigeeit gervorben; idf eradife ben æag für verloren, an Deffien 2bbent id nidt auf ein Sturct


 faft alle Sanowerfe vertreten; id babe mid) nad unb nadh in faft allen verfudt uno
 wiebertyott gern, daß id) ber befte 2 (rbeiter ber 2 (nftalt fei, bas madt mid immer febtr

 bat Die rohe Srait. Die fid) fein MaE uno 3iel roufte, bie fidh an Der ßemätigung fanverer ভteinmafien mübe toben wollte, in beftimmte Babnen gelentt, und hat midh gelebrt, Die Dofís gefunben શemidienverftandes, weithe mir die Natur gegeben, alš eil
 felbft ein ©tüct ©enie fei.

 unt Dem $\mathfrak{T r o g e}$ eince Fanatifers fudte er dem fiatholizismue zur §erridaft zu ver=
 an; er frelte im Schlofie bie શeffe mieber for und geftatete ben Eatholifden Fultus in
 im æeide, befórberte $\mathfrak{B e f e h r u n g e n ~ d u r d ~} \mathfrak{Z n f f e l l u n g e n ~ u n d ~ a n b e r e ~} \mathfrak{B o r t e i t e}$ unt ficherte Den übergetretenen ©reiftiden Den Fortgenus ibrer 9 friñben. Die Kuffidt auf iroiidhe Borteite, auf 2 Cemter uno (5breuftellen verfebte ibre Wirtung nidt bei ben Sdwaden;

 gebenben ॠigierung wegen ßerweigerung bee (5ibes ber $\mathfrak{I r e u e}$ in 5ait gebradit waren, in Freibeit zu iegen, gab etlide æaujent Monconformiften, barunter auch proteftantifde Dificnters, ber menidfliden © Befellidaft zurüct.

15．©．）ふüglid Geftober und ©turm，und wiebertm Sturm und（seftöber ！ Ervig bewöltt，bleifdnver laftet ber Şimmel berab；
Siniehoch tiegen die（Saffen verfinneit，und es adizt，nur mühiam Durds פfadlofe bie $\mathfrak{B a h n}$ rü̈blend，bas idwere（Seipann．
Saum now bem leidteren Sdlitten getingt bie gefabbrlide ঞeife， Sft einfinfend im ©dnce fraudelt bas Etingelnbe Æob．
 Ueber bie Stabt，unt umionft frebt mir ins Freie ber Sinn．
gobert benn auf im תamin，ibe troftliden Flammen，uno itheudhe， Wärmenber Beder，ben Drude trüber（SebanEen mir fort ！
（fyd）aud）fucc＇id．bervor aus bem ভdrein，ibr vervitterten Blätter， Die id bereinft im Genus goloner Jage beidirieb，
2（te id），ein $\mathfrak{F}$ Banberer，nod mit bem truntenen 2 （uge ber Jugenb， $2(\mathrm{n}$－ben（Geftaben umber füotider शneere gefdmeift．
Cettiam blict ibr mith an im Geflacter bes norbifden Serbes， Fremo faft，aber ibr babt balo mir bie Seete getoft，
und im belebenben seaud）ber（Frinnerung fhrwebt bie befreite $\mathfrak{W}$ ie von $\mathfrak{F}$ tügeln bes © divane teife getragen binaus．

2．Beigen ©ie，burd Eurze Cäge，סie DoppeffinnigE゙eit ber folgenben ⿹勹artizipien． ie nadibem fie verjdiebenen Berben angehören：－ geboten，geraten，geftanben，gewäbrt，getobt．
10．3．Ueberfesen ©ie ins Englifde，mit Eurzen erflärenben Bemert̂ungen：－
（a．）Ein grojee פ） Und gibt bem Urteil böbere ©refege．
（b．）EE\＆（ä́st fid）nid）t übereiten，wo nid）t gezogert werben barf．
（c．）DaE ja baś spidtige 2 đtese verflüdtige， ふlänze ber Dauerftern， Erriger Siebe תern．
（d．）Der 2atte vertiert eines ber gröften spemidenredte，－er wirb nidht mebr von－ feines（steiden beurteilt．
（e．）Wenn Sxanner fick entzweien，bảtr man billig Den תlügften für ben ভdiutoigen．
4．Ueberiegen ©ie ins Drutide：－
（a）Though I have only known him for three months，I feel as if I had known him for years．
（b）Had you told me sooner of this，I might perhaps have done something to get you out of your difficulty．
（c）There is no earthly use of your trying to persuade me of going in for this mad undertaking．
（d）It is yet too early to say whether or not the firm is likely to weather the storm．
（e）I could never convince myself of the pretender having had any just claim to the throne．

# COMMERCIAL GERMAN． 

Wednesday， 27 th June．-4 to 5.30 P．M．

Value．
25.

1．Translate into English：－
ゆerrn ฐ．Braun，¿onbon，Den 14．פアarz 1905.
Bremen．

 §bre Æednung Eauften：－

| 10 Ballen Smyrna Baumpootle |  |
| ---: | :--- |
| 8 | （Seorgia |
| 12 | $\prime \prime$ |
| Demerara |  |

iảmtlid）von vorzüglider ©ưte，womit ©ie，wie wir nidt zweifetn，zufrieben fein werben．
$\mathfrak{F} \ddot{\mathrm{ur}}$ ben $\mathfrak{B e t r a g}$ ber inliegenben Faftura belieben Sie uns mit £l16 16s．§u Erebitieren，Dagegen uns mit Derferben Summe fủr umfere beutigen $\mathfrak{I r a t t e n}$ auf Sie， jebe（c）$£ 588 \mathrm{~s} .2$ d．， 2 शit．bato，eigene Nrbre，$\quad$ zu belaften．

Wir benug̨en Diefe Betegenbeit §bnen unfern $\mathfrak{F p r e i b c o u r a n t ~ z u ~ u ̈ b e r r e i d e n , ~ u n o ~}$ empiebten uns $\mathfrak{J}$ nen，

2ctungevol！，
றึüller u．（50．
2．Write in German，a letter to a firm in Bremen，saying that you are desirous of increasing your business relations in Germany，and，for that purpose，you are sending a representative to travel for you，and solicit orders in that country．Ask the firm to give your representative all the assistance in their power，and also to advance him any sums of money he may require for his expenses，to the extent of $£ 200$ ．

3．Explain briefly in German the meaning of the following business terms：－
c．i．f．cotton，settling day，del credere commission，sundries account．
Either－
4．Translate the following market report：－
Betreibe und Futtermittel．Berlin，2．März．Die nad Weftrutopa

 gegeben．Juti fotgte bon $M 187 \frac{3}{4}$ auf $M 187 \frac{1}{4}$ ，©eptember galt zuteert $M 182 \frac{3}{4}$ ．（5reif $=$ bater $\mathfrak{W}$ Seizen hat an $\mathfrak{B e}$ eadtung nidt gerwonnen，ber biefige $\mathfrak{B o r r a t}$ bat fid im 马ebruar um 1511 t aut 4800 t vermehrt．Roggen betunbele mebr शुinerftanbefabhigerit namentlid in feinen auf ben פrangel an ausreidenber guter $\mathfrak{刃}$ are fid futgenben relatio hoten عieferungepreifen．Nai rourbe zulegrt mit $M 170 \frac{1}{3}$ ，Julf mit $M 170 \frac{1}{4}$ bezabit． $\mathfrak{B e}$ ibe عieferfuiften galten vor abt Tagen $M 170$ ．Dor biefige $\mathfrak{F}$ ． um 339 t abgenommen auf 1784 t ．Das（Seidäft mit Safer war zwar redit idflver＝

 gute 9 greife．

תotonialmaren und \＆anbépprobulte．§amburg，2．刃ärz．Saffee．\＆oto marit．Umiak etwa 3000 ธ．Diver［p．

## Or (instead of question 4)-

5. (a) Translate into English the following sentences :-

Or (instead of question 4)-
5. (a.) Translate into Euglish the following sentences:-
(1) Die $\mathfrak{I r a t t e}$ wurbe ourd) Fimellen gebectt.

(3) Die Differens bwiīuen ber ©umme ber Solls und Sabenfeite wito Galbo genannt.
(4) Die Unfoften fbliesen ein:- Zollangabe, शieocrlagegebübren, Wet= vartung, (Sonrtaae, Xifturans unt ©tempel.
(b.) Translate into German :-
(1.) The bills of lading must be endorsed by the shippers.
(2.) We sent the cheque by registered letter.
(3.) The goods were forwarded through a Bremen firm.
(4.) The principal office books are the cash book, the day-book, and the ledger.

GAELIC.
Thursday, 28th June.-2 to 5 P.M.
[N.B.-Candidates who obtained the Leaving Certificate in Gaetic in 1905 and who desire to get additional marks for the King's Scholarship Examination in 1906, should omit questions I. and II. in this paper,
Valuk. and should take instead questions VIII. and IX.]

1. Translate into English :-

Cha'n abair mi diog ${ }^{1}$; ach chi siun. Air mo shon fhéin cha léir
25. dhomh am nor-fheum a tha anns a' chabhaig so tha sgaoileadh thar an t-saoghail a nis,-a h-uile h-aon 's a h-uile nì 'na chabhaig; carbaidiaruinn ${ }^{2}$ a' falbh leth-cheud mile 's an uair; gu dé dheth sin? Am bheil so ach a' mealladh dhaoine o'n dachaidh ? Nach fhaic thu daoine b' àbhaist bhi glic, a nis mar gu'm biodl teine air an earbaill? Cha'n fhan iad seachduin aig an tigh, ach air an ais's air an adhart ; a mach an Dunéideann an diugh 's an Lunnuinn am màireach, àitean nach fhaca na daoine coire bho'n d'thàinig iad, riamh; agus nach 'eil a' bhuil, a h-uile sgillinn a chruinnich iad aig an tigh 'g a chost air falbh. Am bheil ar tighearnan a nis na's fheàrr na iadsan bho'n d'thainig iad? Cha'n fhiach leo am mà ${ }^{3}$ fhéin a thogail a nis, ach Bàillidh ${ }^{4}$ mor 's Baillidh beag, Sgriobhadairean 's Luchd-lagha. Gabhaibh mo leth-sgeul, ach sin agaibhse an fhìrinn; thug sibh fhéin a mach $i$, a lion beagan is beagan, mar a dh'ith an cat an sgadan. Ach slàn leibh; cuiribh a' mhàileid ${ }^{5}$ far nach ruig na radain oirre.

$$
{ }^{1} \text { syllable }{ }^{\text {factor. }}{ }^{2} \text { railway train. obag. }{ }^{3} \text { rent. }
$$

Value. 2. Translate into English one of the following :-
15.
(a) Am Breacan uallach.

B' fhearr leam breacan uallach
Mu m' ghuaillean 's a chur fo m' achlais, Na ged a gheibhinn cota
De'n chlò as fheàrr thig á Sasunn.
Bu mhaith an là 's an oidhch' thu,
Bha loinn ort am beinn's an cladach, Bu mhaith am feach ${ }^{1}$ 's an sith thu, Cha righ e am fear chuir as duit.
${ }^{1}$ war.
(b) A' Chuthag.

Failt' ort fhéin, a Chuthag ghorm,
Le t'oran ceòlmhor milis ;
'S e seirm do bheobil 's a' Chéitein òg A thogadh bron mo chridhe.
Ged theicheas tu roimh 'n fhuachd air àu, Gu'm faic do ghleann thu rithist ; Ach 'nuair bheir mise ris mo chùl, Cha bhi mo dhùil ri tilleadh.
${ }^{1}$ euckoo. ${ }^{2}$ May.
20. 3. Reproduce, in English, the passage read out.
20. 4. Translate the following passage into Gaelic :-

## The Double Lesson. ${ }^{1}$

Dean Swift, the great English writer, was not a generous man; he seldom gave anything to the servants of those who sent him presents ${ }^{2}$. But he once received a good lesson from a lad who very often brought him hares and other game. ${ }^{8}$ One day the boy came with a pretty heavy basket of fish and game ; be knocked at the door, and the Dean, by chance, opened it himself. "Here," said the boy, gruffly, "my master has sent you a basket full of things." Swift, displeased at the boy's manner, said to him: "Come here, my lad, and I will teach you to deliver a message a little more politely; imagine yourself Dean Swift, and I will be the boy." Then, taking off his hat and addressing the lad, he said: "Sir, my master sends you a little present, and begs you will do him the honour to accept it." "Oh, very well, my boy," replied the lad, "tell your master that I am much obliged to him, and there is half-a-crown for yourself."
${ }^{1}$ leasan. 2 tiodhlac. sitheann.
5. Answer one of the following :
(a) What case do Prepositions govern in Gaelic ? Name two Prepositions which do not always follow the rule, and give examples of their construction.
(b) Compare the adjectives mòr, beag, olc. Translate and parse $1 s$ fhedirrd e sid.
8. 6. Express, in English, the meaning of any four of the following phrases and sentences (mere translation of the words will not suffice) :-
An là chi 's nach fhaic. Bu dual da sin. Is ann air a thainig an dà latha. Is rìgh an càm am measg nau dall. An cuir i fodha an rudha? Anail a' Ghàidbeil-am mulach. Tha an sgeir ris ; cum leis oirre.
8. 7. Express in your local idiom, in Gaelic, any four of the following:-

The farmer got seven pounds each for his stirks at last May market. Take in a reef. The lamb is all but dead. Cease your talk. Keep to windward of that island. He never did, and never will do, the right. Milk with water added to it.
[Questions VIII. and IX. are only for Candidates who took the Leaving Certificate in Gaelic in 1905, and who wish to obtain additional marks for the King's Scholarship Examination in 1906. See note, N.B.
25. 8. Translate into English :-

Ghabh e suas bràigh a' chladaich, is rainig e an cearcall teine. Leuns e thar an teine. Bha an $\sin$ an $t$ taon eilean a bu bhoidhche chunnacas o thùs an domhain gu deireadh na dilinn. Ghabh e suas feadh an eilean is chunnaic e cnoc maol buidhe 'na mheadhon. Bba Ionmhuinn mhnatha 'na suidhe air a' chnoc, is oglach mor's a cheann air a glùn, is e 'na chadal. "Innis dhomh gu dé as dùsgadh do'n oglach," ars' an Gaisgeach. "Is dùsgadh dha," ars' ise, "rud nach dean thusa na aon ghaisgeach anns an domhan mhor ach Gaisgeach na Sgéithe Deirge, d'an robh e 's an dàn tighinn do'n eilean so, agus an carragh cloich' ud thall a bhualadh air an duine so anns an uchd." Rinn esan sin, agus dhùisg an t-oglach. An caraibh a chéle ghabh iad, 's bha iad a' leadairt a chéile gus an robh beul an ammoich ann. Mu dheireadh bhuail an gaisgeach an t-oglach ris an talamh, agus sgath e dheth an ceann. Thug e an làmh o'n ghualainn deth, 's thug e an cridhe as a chom, 's thug e an ceann bhàrr a mbuineil. Chuir e a làmh am póca a' ghaisgich mhairbh 's fhuair e tri fiaclan seann eich ann, agus, leis a' chabhaig, ghabh e an àite fiaclan an righ iad 's thug e leis iad. Chaidh e gu tom coille 's bhuain e gad, agus cheangail e air a' ghad an làmh 's an cridhe's an ceann.
15. 9. Translate into English one of the following:-

## An Iolair.

Cha'n 'eil ian's na speuran
As bréine na 'n iolaire,
Cha'n ionann idir beus di
'S do dh' fhéidh anns na firichean ;
Bidh iadsan moch ag éirigh
A' feuchainn na biolaire,
'S bidh is' air seann each caoile
A' slaodadh a mhionaich as.
Clann Ghriogair.
Griogaraich gun fhàillinn cruadail,
Bha iad riamh gu h-uasal rioghail ;
'N àm cogaidh, troid, no tuasaid,
C'ait' an cualas bonn d'am mi-chliu ?
'Dol an aghaidh teine 's luaidhe,
'N àm na ruaig cha b'iad a striochdadh ;
'S fhad 's a leanas sibh ri'r dualchas,
Cha toir iad buaidh oirbh luchd 'ur mìruin.

# GAELIC. <br> Thursday, 28th June.-2.45 p.m. 

This paper must not be seen by any Candidate.
To be read out twice, slowly and in an accent with which the Candidates are familiar, by the Supervising Officer (or the Teacher) at 2. 45 P.M. The substance of this story is to be reproduced by the Candidates in English. No notes may be made while it is being read.

Before commencing to read it, the Supervising Officer or the Teacher must write upon the blackboard the title of the story as follows: "Am Fiadh." He should also warn the Candidates that they are not to aim at reproducing the passage in all its details, and in the same words or order of words as the original. What is desired is that they should attempt to relate the story in English in their own diction and idim.

## Am Fiadh.

'Nuair bha mi mu sheachd bliadhna dh' aois, chuireadh mi fhéin agus companach dhomh air ghnothach do'n bhaile bu dlùithe dhuinn, -mu dhà mhile gu leth a dh' astar. Bha an ceum rathaid eadar an dà bhaile dol troimh choille, cois na mara. A' fàgail na coille dhuinn, far an robh camus ${ }^{1}$ beag le traigh ghainmhich aig a cheann, chuala sinn ceum aotrom ' $n$ ar déigh, is co bha 'n so ach aon de na féidh challaidh ${ }^{2}$ bha mu'n bhaile. B'e droch theisteas a bh' air a' bhrùid so ; thug e ruith mharbhaidh air dà no tri de mhuinntir an àite, ach cha d'thuirt duine ris gu'm b'olc. A nis, cha robh iarraidh sam bith againne air cuideachd an fhleasgaich so, agus nochd sinn sin dha gu soilleir ; ach rinn esan suas inntinn gu'm biodh e' n ar cuideachd, a dheòin no dh' ain-deoin. Theich sinn, ach bha e cheart cho maith dhuinn teicheadh o'n ghaoith. Bha esan air ar sàil, is cha robh dol a nunn no nall againn ach deanamh mar rinn Donnachadh Bàn 's a' bhuidheann leis an robh e aig blàr na h-Eaglaise Brice ${ }^{3}$ :

> "Ghabh sinn a mach air an abhainn,
> Dol gu'r n-amhaich anns an linne."

Ach b'i an abhainn a bh' againne an Cuan-siar ${ }^{4}$, agus an linne, an Linne Dhiùrach ${ }^{5}$. Faodar a bhi cinnteach nach deachaidh sinn ro fhada air an t-slighe sin. 'Nuair thainig a' bhrùid gu beul an làin sheas e greis, ach, a réir coltais, smaointich e nach b'fhiach dha a chasan a fhliuchadh air ar son. Thóisich e air ionaltradh, ach thogadh e cheann an drast 's a rithist js bheireadh e sùil dh' fheuch an robh sinn far an d' fhàg e sinn. Bha sinue an droch chàs; bha an làn ag érigh, 's bha simn a' meatachadh le fuachd 's le eagal. Thöisich sinn mu dheireadh air fàth a ghabhail air, 'nuair a bhiodh a cheann-san crom, gu bhi goid air falbh uidh air n-uidh ; agus aon nair's gu'n d' fhuair sinn ar cas air talamb tioram, thàr sinn as do 'n choille.
${ }^{1}$ bay. ${ }^{\text {E tame. }}$ ² Falkirk. ${ }^{4}$ Atlantic. ${ }^{5}$ Sound of Jura.

## SPANISH.

Thursday, 28th June.-2 P.M. to 5 P.M.

> The whole of this Paper should be answered. Candidates will not be allowed to pass unless they reach the necessary standard both in composition and in translation.

## Section I.

15. 
16. (a) Translate into English:-

Estas cualidades eran comunes á los habitantes de la región de los bosques y del litoral. Mucho dife ían de ellos los de las llanuras, que en el país llamaban por esto llaneros, hombres cuyas costumbres y carácter, por una singularidad curiosa, eran y son aún bárbaras más que americanas ó europeas. El clima abrasador de sus desiertos y las inundaciones de sus territorios les obligan á adoptar un vestido muy sencillo, y moran ordinariamente ell cabanas á las riberas de los ríos, en incesante lucha con los elementos y las fieras.

Sus ocupaciones principales son la crianza y pastoreo de los ganados, la pesca y la caza; si bien algunos cultivan pequeñas porciones de terreno para obtener raices comestibles. Esta vida activa y dura, sus marchas continuas y su necesaria frugalidad, desarrollan en ellos gran fuerza muscular y agilidad extraordinaria. Pobres en extremo y privados de toda clase de instrucción, carecen de aquellos medios que en las naciones civilizadas aumentan el poder y disminuyen los riesgos del hombre en la faena de la vida.

Acostumbrado al uso constante de la fuerza y de los artificios para defender su existencia contra todo linaje de peligros el llanero es, por neccsidad, astuto y cauteloso ; pero jamás hace traición al que en él se confía, ni carece de fe y de honor; debajo de su techo recibe hospitalidad el viajero, y ordinariamente se le ve rechazar con noble orgullo el precio do un servicio.
(b)-Señora-dijo á la mañana siguiente el ama de llaves-ahí está el criado que ha enviado la señora doña Eufrasia.
-Bien ; dile que entre-contestó la marquesa.
A poco entró la más extraña figura que darse puede. Era una rara muestra de lo que es la expresión á los rostros y cl continente á las personas; pues siendo el que se presentó un hombre sin deformidad alguna, ni alto ni bajo, ni gordo ni flaco, con facciones regulares, buenos ojos y buena dentadura, nadie podía mirarle sin reirse. Estaba basta pero aseadamente vestido ; sólo que los pantalones eran demasiado cortos y en cambio los zapatos demasiado largos; la chaqueta era demasiado angosta y el corbatín negro demasiado ancho; lo que le obligaba á levantar la cara con inusitada arrogancia

Entró dicho sujeto, saludó y dijo con la más graciosa sonrisa y la más marcada pronunciación gallega.
--Dios le dé buenos días á usía y á la compañia.
La marquesa estaba sola.
-Buenos días. ¿Tú eres el que vienes... ?
-De parte de la señora coronela, sí, señora.

- i Y cómo te llamas ?
-José Fungueira, para servir á usía y a la compañia; pero mis amos siempre me han llamado Pepino.
$-i \mathbf{Y}$ de qué tierra eres?
-Gallego de Galicia, mas acá de Vigo, pasada la Puente San Payo y Pontevedra, antes de llegar á Caldas, á mano derecha. . . . .
-Bien i y sabes servir ? i Sabes limpiar la plata, el cristal y los cuchillos? Es que yo soy muy extremada en ese punto.

25. 2. Translate into Spanish :-

Since I last wrote to you I have made a tour of the Northern Lakes, and have travelled more than a thousand miles, partly on horseback, partly by boat. The latter part of my journey has been rather fatiguing, but, at the same time, it has been very interesting, and I have enjoyed myself very much.

Since I arrived here I have been looking out for a small estate, and have been fortunate in obtaining some very fair land from the Government, for which they ask only 500l. I am going to Toronto next week to pay the first instalment of this money, and then I shall return to New York, probably by way of Boston, where I wish to pay a short visit to my uncle George.

The more I see of Canada, the more I like it. The climate is magnificent and the people have treated me with the greatest kindness and hospitality everywhere I have stayed.
3. Write a Spanish version of the passage read out.

SECTION II.
10. 4. (a) Give the superlative of nuevo, feliz, frio, poco. Form diminutives from chico, torre, pan, mujer. What are the ordinal numbers corresponding to cinco, nueve, once, ciento?
(b) Write out the present indicative of the following verbs:merecer, huir, caber, acordarse. Give the 2nd pers. sing. imperative of jugar, poner, decir, oir.
8. 5. How is the passive voice in English to be rendered in Spanish ? Give examples.
6. (a) Translate into English the following sentences, adding notes on. their grammatical construction :-

Logradas estas ventajas se facilita la tarea.
Dáselo á quien quieras.
Ya sé lo enferma que está la señora.
Este joven se viste á la francesa.
(b) Translate into Spanish :-

As soon as you have finished, take the letters to the pos Bring me the one you think best.
I have paid him two hundred and fifty thousand pesetas.
Take off your hat, but keep on your coat.

## SPANISH.

Thursday, 28th June.-2.45 P.M.
This Paper must not be seen by any Candidate.
To be read out twice by the Supersising Officer (or a Teacher) at 2.45 p.m. The substance of this story is to be reproduced by the Candidates in Spanish from memory. No notes may be made while it is being read.

A rich merchant once invited some friends to dinner and promised them, as a treat, a certain rare and delicate fish. But, when the day appointed arrived, he found that there was only one shop in the town where he could obtain such a fish, The fishmonger, knowing that he was rich, asked him 50 pesetas for the fish. Aftcr bargaining in vain for some time, the rich man grew angry and went away without buying it. During the dinner the guests were much astonished to see the servants bring in a dish, on which, instead of the expected fish, were fifty pieces of silver. The host thereupon related what had occurred and said that, rather than let the fishmonger triumph, he proposed to give the fifty pesetas to the poor of the town, and to dine without fish that evening The guests loudly applauded the action of the rich merchant, and asked to be allowed to add their own contributions to the money in the dish.

## MATHEMATICS.

## Lower Grade.-I,

$$
\text { Wednesday, 20th June.-11 A.M. to } 1 \text { P.m. }
$$

Candidates should answer only six questions, namely, Nos. 1, 2, 3, 4 and any two of the other five questions. All the figures should be accurately drawn, and, where geometrical constructions are employed, the construction lines should be shown. Proofs of geometrical constructions need not be given unless specially asked. Marks are given for neatness and good style.
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.

1. If two sides of a triangle be equal, prove that the angles which are opposite the equal sides are also equal.
Prove that the triangle, whose vertices are the mid points of the sides of an isosceles triangle, is itself isosceles.
2. If a straight line, cutting two other straight lines, make an exterior angle equal to the interior and opposite angle on the same side of the line, prove that the two straight lines are parallel.
$A B$ is at right angles to $C D$, and $E F$ is at right angles to $G H$. If $A B$ be parallel to $E F$, prove that $C D$ is parallel to $G H$.
3. 3. Draw a rectangle $A B C D$, in which $A B=4 \cdot 16^{\prime \prime}, B C=4 \cdot 3^{\prime \prime}$. Take points $P, Q, R, S$ in $A B, B C, C D, D A$, such that $A P=1 \cdot 76^{\prime \prime}$, $B Q=0 \cdot 7^{\prime \prime}, C R=1 \cdot 76^{\prime \prime}, D S=1^{\prime \prime}$.

Calculate the area of $P Q R S$ in square inches.
15. 4. Define a tangent to a circle. From your definition prove that the angle between the radius drawn to the point of contact and the tangent is a right angle.
$A B C$ is a triangle, right-angled at $A ; A L$ is the perpendicular from $A$ to $B C$, and $L M, L N$ are the perpendiculars from $L$ to $A B, A C$; prove that $M N$ is a tangent to the circles described on $B L, L C$ as diameters.

## Answer Two questions out of the following five.

15. 5. With only ruler, compasses, and set square, draw two straight lines $A B, A C$, such that the angle $B A C=45^{\circ}$.

Draw also, by means of the same instruments, two lines $B D$, $B E$, meeting $A C^{\prime}$ in $D$ and $E$, such that the angle $B D A=75^{\circ}$, and the angle $B E A=120^{\circ}$.

Prove that the angle $A B E$ is $\frac{1}{8}$ of the angle $A E B$, and $\frac{1}{3}$ of the angle $B A C$.
15. 6. If two angles at the circumference of a circle be equal, prove that the arcs on which they stand are equal.
$A B, A C, A D$ are three thin rods rigidly joined at $A . \quad P$ and $Q$ are two thin pins inserted in a flat table. If the rods be laid on the table, so that $A B$ touches $P$, and $A C$ tonches Q , show that $A$ must lie on a certain circle, and that $A D$ passes through a fixed point in the circumference of that circle.
7. What is a locus?

Draw and state in words, without proof, the complete locus of a point, which moyes so as to be always equally distant from two given intersecting straight lines.

Prove that any point which is not on your locus is not equidistant from the two straight lines.
15. 8. By drawing a number of tangents of fixed length to a fixed circle from points on its circumference, find out the locus of their extremities.

Draw this locus accurately for the case in which the radius of the fixed circle is 4 cm and the fixed length is 4.2 cm .

If from any point in your locus a tangent is drawn to the fixed circle, prove that it is of the required length.
9. Prove that the three straight lines drawn from the vertices of a triangle respectively perpendicular to the opposite sides meet in a point.

## MATHEMATICS.

Lower Grade.-II.

$$
\text { Wednesday, } 20 \text { th June. }-2 \text { р.м. to } 4 \text { р.м. }
$$

10. Candidates should answer only six questions, namely, Nos. 1, 2, 3, 4, and any two of the other five questions. Marks are given for neatness and good style.
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 for the graphical work.
11. 12. (1) Simplify the following expression, and express the result as a product of factors :
$(a+b)^{2}-\{9 a b-5(a+b)(a-b)\}-\left[b(b-3 a)-\left\{3 a b-5(a-b)^{2}\right\}\right]$.
(2) Find correct to three decimal places the value of

$$
\frac{1}{1-3 x}-\left(1+3 x+9 x^{2}\right)
$$

when $x=0.09$.
2. A dealer buys $a$ sheep at $p$ shillings each, and $b$ sheep at $q$ shillings each ; find (1) the average price which he pays for a sheep, and (2) at what price per sheep he must sell the whole number, in order that his profit may be $5(a+b)$ shillings on the whole transaction.

Verify your results when

$$
a=7, \quad b=8, \quad p=45, \quad q=55
$$

3. Nolve the following equations, finding the roots correct to two

$$
\begin{aligned}
& \text { (1) } \frac{2 x-7}{3 x-8}=\frac{2(x-9)}{3(x-11)} \\
& \text { (2) }\left\{\begin{array}{l}
x=y+6 \\
x^{2}=y+48
\end{array}\right. \\
& \text { (3) } 3 x^{2}-7 x=100
\end{aligned}
$$

4. Make a table giving the value of
(1) $x^{2}$,
(2) $-3 x$,
(3) $x^{2}-3 x+2$,
when $x$ varies from -1 to +4 , taking $\frac{1}{2}$ as the interval between each pair of values.

Use this table to draw a curve, which will show how

$$
x^{2}-3 x+2
$$

varies, while $x$ increases from -1 to +4 , taking one inch as unit.
Find from your figure the values of the expression

$$
x^{2}-3 x+2
$$

when (1) $x=\frac{1}{4}$, and (2) $x=2 \frac{1}{4}$,
and verify your results by substituting these values of $x$ in the given expression.

LEAVING CERTLficate examination.
Answer Two questions out of the following five.
15. 5. Find the value which $c$ must have, in order that the expression

$$
\begin{aligned}
& x^{4}-4 x+c \\
& x^{2}-2 x+1
\end{aligned}
$$

without remainder.
15. 6. A rides from $P$ to $Q$ at the rate of 12 miles an hour and returns at the rate of 8 miles an hour. B rides both ways at the rate of 10 miles an hour, and takes 10 minutes less time than A to do the double journey. Find the distance from $P$ to $Q$.
15. 7. If

$$
\frac{a}{b}=\frac{c}{d}
$$

prove that

$$
\begin{aligned}
& \text { (1) } \frac{2 a-3 b}{3 a+4 b}=\frac{2 c-3 d}{3 c+4 d} \\
& \text { (2) } \frac{a^{2}-b^{2}+c^{2}-d^{2}}{(a-b)^{2}+(c-d)^{2}}=\frac{a+b+c+d}{a-b+c-d}
\end{aligned}
$$

15. 8. Prove the identities

$$
\text { (1) } \frac{1}{x+1}-\frac{2}{x+2}+\frac{1}{x+3}=\frac{2}{(x+1)(x+2)(x+3)} \text {; }
$$

$$
\text { (2) }\left\{a^{2}+(a+b)^{2}+b^{2}\right\}^{2}=2\left\{a^{4}+(a+b)^{4}+b^{4}\right\}
$$

9. The freezing and boiling points of water are represented by $0^{\circ}$ and $100^{\circ}$ on the Centigrade scale, and by $32^{\circ}$ and $212^{\circ}$ on the Fahrenheit scale. Draw a graph connecting these scales, taking one inch vertically to represent $20^{\circ}$ Centigrade, and one inch horizontally to represent $40^{\circ}$ Fabrenheit.

By your graph convert $20^{\circ}$ Centigrade to the Fahrenheit scale.

## mathematics.

Lower Grade.-III.
Thursday, 21 st June. -2 P.M. to 3 P.M.
Marks are given for neatness, arrangement, and style.
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.
.9. 1. Find to the nearest penny the sum required to pay interest at$2 \frac{3}{4}$ per cent on $£ 768443386$.
9. 2. A metre of wire weighs 43 grams ; find to the nearest millimetre the length of portions of the same wire which weigh
(1) 15 grams,
(2) 1 kilogram.
9.: 3. A piece of platinum 17 cubic inches in volume weighs 12 pounds avoirdupois, while a piece of gold 77 cubic inches in volume weighs 54 pounds; find to the nearest ounce the difference between the weight of a cubical block of platinum measuring 5 inches each way and the weight of an equally large block of gold.
9. 4. A town contains 75614 inhabitants, of whom 51 per cent are females. Of the females 23 per cent are married. Find the number of unmarried females in the town without unnecessary calculation.
9. 5. There are 12 stations on a railway line. Single and return tickets have to be printed from each station to each of the others for first, second and third class passengers ; find the cost of printing 500 of each kind at $9 d$. per hundred tickets.
9. 6. It has been proposed to divide $£ 1$ into 1000 equal parts called mils.
(1) Express the difference between a farthing and a mil as a decimal fraction of $1 d$.
(2) Express 4496 mils in pounds, shillings and pence correct to the nearest farthing.

## MATHEMATICS.

Higher Grade.-I.
Wednesday, 20th June.-11 A.m. to 1 p.m.
Candidates should answer only six questions, namely, Nos. 1, 2, 3, 4, and any two of the other five questions. All the figures should be accurately drawn, and, where geometrical constructions are employed, the construction lines should be shown. Proofs of geometrical constructions need not be given unless specially asked. Marks are given for neatness and good style.
10. 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.
11. 1. Prove that the area of any parallelogram is equal to the area of the rectangle contained by one side of the parallelogram and the perpendicular distance between that side and the opposite side.

If $A B C D$ be a parallelogram in which the distance between $A B$ and $C D$ is greater than $A B$, prove that the distance between $B C$ and $D A$ is less than $B C$.
17. 2. Prove that the area of the rectangle contained by the sum and difference of two straight lines is equal to the difference between the areas of the squares on the two lines.
Show how to find a point $E$ in the base $B C$ of a triangle $A B C$ produced if necessary, such that $B C . B E=A B^{2}-A C^{2}$.
Construct a figure for the case when $A B=6.5 \mathrm{~cm}, A C=5.5 \mathrm{~cm}$, $B C=7.5 \mathrm{~cm}$.
Find $B E$ both by calculation and by measurement.
20. 3. In aqual circles prove that angles at the circumference which stand on equal arcs are equal.

Having given the base of a triangle, the size of the vertical angle, and a point in the bisector of the vertical angle, construct the triangle, stating your construction without proof.

Draw a figure for the case in which the base $B C$ is $4^{\prime \prime}$, the vertical angle $B A C$ is $75^{\circ}$, and the point $P$ on the bisector is such that if $P N$ be the perpendicular to $B C, P N=0 \cdot 6^{\prime \prime}, B N=3^{\prime \prime}, P$ and $A$ being on the same side of $B C$.

Measure the angle $B$, and deduce the value of $C$.
12. 4. If two triangles $A B C, F Q R$ have the angle $A=P$, and $C A: A B=$ $R P: P Q$, prove that the angle $B=Q$.

If two similar triangles have their corresponding sides parallel, prove that the lines joining corresponding vertices meet in a point,

Answer two of the following questions.
15. 5. $A B, B C, C D, D A$ are four rods forming a parallelogram with joints at the four vertices. The rod $B C$ is continued beyond $C$ to a point $E$.

Show that the straight line $A E$ will always cut $C D$ in the same point $F$ at whatever angle $A B$ is inclined to $A D$.

Prove that $A E$ bears a constant ratio to $A F$.
Show that by means of this property the instrument may be made of practical use in drawing to scale.
15. 6. $A B C D E$ is a regular pentagon ; $A E, C D$ meet in $F$; prove that the straight lines drawn from $D, E, F$ parallel respectively to $A E, A D, A B$ meet in a point.
15. 7. Prove that in equal circles chords of the same lengths subtend equal angles either at the centre or at the circumference
$A C B$ is a straight line in which $A C=2 \cdot 4^{\prime \prime}, C B=1 \cdot 6^{\prime \prime} ; P$ is any point such that the circles circumscribing $P A C, P B C$ are equal. If $Q$ be the centre of the circle circumscribing PAC, $R$ that of the circle circumscribing PBC, find and construct (1) the locus of $Q$, (2) the locus of $R,(3)$ the locus of $P$, stating your construction clearly, with short reasons for it.
10. 8. Prove that if a straight line be perpendicular to two intersecting straight lines, it is perpendicular to every straight line in the plane which they determine.
$A B, A C$ are two straight lines which meet at an angle of $45^{\circ}$, $A B$ is 10 cms in length; at $B, B D$ is drawn perpendicular to the plane $B A C$ and 2.5 cms in length. Calculate the length of the perpendicular from $D$ to $A C$.
15. 9. $A B C D$ is a rectangle whose diagonals meet in $E$, the length of each diagonal being $1 \cdot 5^{\prime \prime}$. Through $E$ a straight line $E F, 1 \cdot 8^{\prime \prime}$ in length, is drawn perpendicular to the plane of the rectangle. Find the centre of the sphere passing through $A B C D F$, and calculate the length of its radius to two decimal places.

## MATHEMATICS.

Higher Grade-II.
Value.
Wednesday, 20th June.-2 P.M. to 4 P.M.
Candidates should answer only six questions, namely, Nos. 1, 2, 3, 4, and any two of the remaining five questions. Marks are given for neatness and good style.
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 logaritbmic tables are provided.

1. If $p$ pounds accumulate for $n$ years at $r$ per cent. compound interest payable annually, find an expression for the amount at the end of that time.
As an example, find to the nearest hundred pounds the amount due after $£ 5,000$ has accumulated for 25 years at $4 \frac{1}{2}$ per cent.
2. Simplify the following expressions :-
3. 

(1) $\frac{1}{x+1}+\frac{2}{x^{2}+3}+\frac{8}{\left(x^{3}-1\right)\left(x^{2}+3\right)}$;
(2) $x^{3}+y^{3}+z^{3}+3(x+y+z)(y z+z x+x y)-(x+y+z)^{3}$.
15. 3. If any integral function of $x$ is divided by $x-a$, prove that the remainder is the expression formed by substituting $a$ for $x$ in the function.
If 3 is one root of the equation

$$
x^{3}-49 x+a=0,
$$

find the other roots.
4. If $\mathrm{N}, \mathrm{N}^{\prime}$ are numerical quantities of the form $a+b \sqrt{ } 2, a^{\prime}+b^{\prime} \sqrt{ } 2$, where $a, b, a^{\prime}, b^{\prime}$ are integers and $\mathrm{N}=\mathrm{N}^{\prime}$, prove that $a=a^{\prime}$, $b=b^{\prime}$.
Simplify
(1) $\sqrt{2}(1+\sqrt{ } 3) \sqrt{ }(2-\sqrt{ } 3)$;
(2) $2(2+\sqrt{ } 3)(\sqrt{ } \mathbf{6}-\sqrt{2}) \sqrt{ }(2-\sqrt{ } 3)$.

Answer Two of the following questions.
5. A boiler consists of a cylinder with hemispherical ends. If the length of the cylinder be 10 feet, and the diameter of its crosssection 5 feet, find its volume in cubic feet to the nearest foot, taking $\pi$ as $\frac{2}{7}$.
6. Simplify and resolve into factors
15. $\left(3 x^{2}+1\right)\left(3 x^{2}+3 x+1\right)\left(\begin{array}{l}\left.3 x^{2}-3 x+1\right)-\left(x^{2}+3\right)\left(x^{2}+3 x+3\right) \\ \left(x^{2}-3 x+3\right) .\end{array}\right.$
7. Find all the real soots of the equations :-

$$
\text { (1) } 12\left(x+\frac{1}{x}\right)^{2}-56\left(x+\frac{1}{x}\right)+65=0 \text {; }
$$

(2) $\left\{\begin{array}{r}x^{3}-y^{3}=91, \\ x^{2}(x-y)=36 .\end{array}\right.$
15. 8. Three numbers are in harmonic progression. If the sum of the numbers be 37 , and the sum of their reciprocals be $\frac{1}{4}$, find the numbers.
15. 9. Draw in one figure and with the same scale and axes the graphs of

$$
\begin{array}{ll}
\text { (1) } y=3-\frac{x}{2}, & \text { (2) } y=\frac{5}{x} \text {; }
\end{array}
$$

from $x=1$ to $x=6$, taking one inch as unit,
Either directly from these graphs, or by means of their tables of values, form the graph of

$$
\text { (3) } y=\frac{5}{x}-3+\frac{x}{2} \text {, }
$$

and find its minimum or turning point as nearly as you can from your figure.

## MATHEMATICS.

## Higher Grade.-III.

Thursday, 21st June.-2 P.M. to 4 P.M.
10. Candidates should answer only six questions, namely, Nos. 1, 2, 3, 4, and any two of the other five questions. Marks are given for neatness and good style. All the figures should be accurately drawn.
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.
10. 1. Prove that when $A$ is acute

$$
\operatorname{cosec}^{2} A=1+\cot ^{2} A
$$

Verify this formula by substituting the values of $\operatorname{cosec} A$ and $\cot A$, when $\sin A=\frac{8}{17}$.
18. 2. From your tables write out in tabular form the values of $\tan \theta$ and $\cot \theta \operatorname{correct}$ to two decimal places when $\theta=10^{\circ}, 20^{\circ}, 30^{\circ}, 40^{\circ}$. Hence find the valucs of $\tan \theta+\cot \theta$ for the same values of $\theta$.
Draw the graph of $\tan \theta+\cot \theta$ from $\theta=10^{\circ}$ to $\theta=40^{\circ}$, and from your figure find a value of $\theta$ which will approximately satisfy the equation

$$
\tan \theta+\cot \theta=4.5
$$

13. 3. A certain tower is known to be 150 feet high. Its angle of elevation as seen from a point in the samc level as the base of the tower is $35^{\circ} 26^{\prime}$; calculate the distance from this point to the base of the tower, and verify your answer by a carefully drawn diagram.
1. 4. Give a geometrical proof of the formula

$$
\sin (A+B)=\sin A \cos B+\cos A \sin B
$$

for the case when $A$ and $B$ are acute, and $A+B$ is obtuse.
Assuming the formula to hold for all values of $A$ and $B$, deduce the correspouding formula for $\cos (A-B)$.
If $\cos A=\frac{8}{T}, \cos B=\frac{12}{13}$, find all the possible values of $\cos (A-B)$.

## Ansuer Two of the folloving questions.

15. 5. Assuming the values of $\cos (A+B), \sin (A+B)$ in the terms of the sines and cosines of $A$ and $B$, find $\cos 2 A$ and $\sin 2 A$ in terms of $\sin A, \cos A$.

Verify the identity

$$
\cos ^{2} 2 A+\sin ^{3} 2 A=1
$$

by squaring and adding these values.
15. 6. If, in a triangle $A B C, A$ is acute, and $a$ is greater than $b$, show that

$$
c=b \cos A+\sqrt{ }\left(a^{3}-b^{2} \sin ^{2} A\right)
$$

Construct the triangle for the case in which $a=5, b=3.5$ $A=38^{\circ}$. Measure the side $c$ and verify your result by calculation.
15. 7. Prove the identities :
(1) $\frac{\operatorname{cosec} A-2 \sin A}{\cos A+\sin A}=\cot A-1$,
(2) $\frac{\sin (A+B)+\sin (A-B)}{\cos (A+B)+\cos (A-B)}=\tan A$.

8 Assuming that

$$
\cos A=\frac{b^{2}+c^{2}-a^{2}}{2 b c}
$$

find $\sin \frac{1}{2} A$ in terms of the sides of the triangle in a form suitable for lagarithmic calculation.

Use your formula and the tables to find the least angle of a triangle whose sides are in the proportion of $7,10,13$.
15. 9. If the bisector of the angle $A$ of the triangle $A B C$ meet $B C$ in $D$ prove that

$$
A D=\frac{a \sin B \sin C}{\sin \frac{1}{2} A\left(\sin B+\sin C^{\prime}\right)}
$$

## ALGEBRA.

Honours Grade.
Wednesday, 20 th June. -11 A.M. to 12.30 P.M.
All the work must be shown, and such explanation added as is required to indicate the methods adopted.
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.
10. Additional marks will be given for neatness, arrangement, and style.

Candidates may answer six questions only, namely, Nos. 1, 2, 3, and one of the alternatives in each of Nos. 4, 5, 6.
15. 1. Prove that when $x$ is a positive quantity, and $n$ increases without limit, $x^{n}$ increases or decreases without limit, according as $x$ is greater or less than unity.

Hence show that, when $x$ is less than unity and $n$ increases without limit, the sum of the series

$$
1+x+x^{2}+\ldots+x^{n}
$$

approaches indefinitely to $\frac{1}{1-x}$
Find the sum to infinity of

$$
1+2 x+3 x^{2}+4 x^{3}+\ldots
$$

when $x=\frac{1}{3}$.
15. 2. If ${ }_{n} C_{\psi}$ represent the number of selections of $n$ things taken riat a time, show by elementary reasoning, and not by a quotation 'of a formula, that

$$
{ }_{n} C_{r}={ }_{n-1} C_{r}+{ }_{n-1} C_{r-1}
$$

Hence deduce the relation

$$
=\begin{aligned}
& { }_{n} C_{0}+{ }_{n} C_{1}+{ }_{n} C_{2}+\ldots+{ }_{n} C_{n} \\
& =2\left\{{ }_{n-1} C_{0}+{ }_{n-1} C_{1}+\ldots+{ }_{n-1} C_{n-1}\right\}=2^{n} .
\end{aligned}
$$

15. 
16. Prove that if $a, b, c$ are the roots of
then

$$
x^{3}+p x^{2}+q x+r=0
$$

$$
a+b+c=-p, \quad b c+c a+a b=q, \quad a b c=-r
$$

Hence find the relation between $p, q, r$, in order that
may have two equal roots.

## Alternative Questions.

15. 

$4 \pi$. Solve the equations
(1) $x^{5}-x^{4}+x^{3}-x^{2}+x-1=0$;
(2) $\left\{\begin{array}{l}x^{2}+3 y=4, \\ y^{2}+x=2 .\end{array}\right.$
$O r$,
15.

4b. Trace the graph of

$$
y=\frac{1}{4} x^{2}(x-3)
$$

and prove that
give turning values of $y$.
15.

5a. The cost of a certain steamer voyage is the sum of two quantities, one of which is proportional to the time taken and the other to the average speed during that time. When the voyage takes 10 days, the cost is $£ 700$; when it takes 14 days the cost is $£ 884$. Find the cost when it takes 8 days.

Also find the number of days which gives the smallest possible cost, and the corresponding cost.

## Value.

$O r$,
15. 5b. Prove that the square of any odd number is of the form $8 n+1$.

Hence show that if the lengths of three sides of a right angled triangle are proportional to three whole numbers, the length of one of the sides which contain the right angle is a multiple of 4.

6a. Prove that
15.
can be resolved into fractions of the form

$$
\frac{A}{x+a}, \frac{B}{x+b}, \frac{C}{x+c}
$$

in only one way.
If
find $A, B, C$.
Or,
6b. Prove that the expression

$$
a x^{n}+b x^{n-1}+\ldots+k x+l
$$

can be expressed in the form
$A(x+1)(x+2) \ldots(x+n)+B(x+1)(x+2) \ldots(x+n-1)$
$+\ldots+K(x+1)+L$.
Express

$$
5 x^{3}+7 x^{2}-9 x-11
$$

in this form.

## GEOMETRY.

## Honours Grade.

Wednesday, 20th June.-2 P.M. to 4 P.M
All ordinary symbols and contractions are allowed.
All the steps of the proofs must be given, and in all cases it should be clearly shown on what assumptions the demonstrations are based.
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.
10.

Additional marks will be given for neatness, good style, and accurately drawn figures.
Candidates may answer six questions only, namely, Nos. 1, 2, 3, and one of the alternatives in each of Nos. $4,5,6$.
15. 1. If two sides of a triangle be given in length, prove that the area of the triangle is a maximum when the contained angle is a right angle.

Prove that the perimeter of a square is less than that of any other parallelogram of equal area.
15. 2. Prove that the rectangle contained by the perpendiculars drawn from any point in the circumference of a circle to two fixed tangents is equal to the square of the perpendicular drawn from that point to the chord of contact.

Hence show that the centres of the inscribed circle and of one of the escribed circles of the triangle formed by the tangents and the chord of contast lie on the given circle.
3. $A B C D$ is a quadrilateral of which the four vertices are not in one plane. Prove that the straight lines which join the mid points of opposite sides meet in a point.

If $P, Q, R, S$ are the centroids of the triangles $B C D, C D A, D A B$, $A B C$, prove that the quadrilateral $P Q R S$ is similar to $A B C D$, and that their centre of similitude is the point of intersection of the straight lines which join the mid points of opposite sides of either quadrilateral.

## Alternative Questions.

15. 4a. $A, B, C$ are three points in a plane, and $D E$ is a straight line in the plane. Find a point $P$ in $D E$, and another point $Q$ in the plane, such that the triangles $A P Q, B P Q, C P Q$ may be equal to three given areas.
From your construction deduce a proof of Menelaus' theorem.
Or,
4b. $A B C$ is a triangle, and points $D, E, F$ are taken in $B C, C A, A B$ such that

$$
\begin{aligned}
& A B+B D=D C+C A \\
& B C+C E=E A+A B \\
& C A+A E=F B+B C
\end{aligned}
$$

Prove that $A D, B E, C F$ meet in a point.
Prove that

$$
A D^{2}=\frac{1}{4 a}(a+b+c)\left\{-a^{2}+a(b+c)+2(b-c)^{2}\right\}
$$

when $a, b, c$, are the sides of the triangle $A B C$.
15. $5 a$. $A, B, C, D$ are four points in a straight line such that $C, D$ are harmonic conjugates with respect to $A, B ; O$ is the mid point of $A B$. Prove that
$\begin{array}{ll}(1) & O A^{2}=O C \cdot O D \\ (2) & D A \\ D B=D C \cdot D O\end{array}$
(2) $D A \cdot D B=D C \cdot D O$
$A, B, C$ being three given points in a straight line, find the position of $D$ such that $C$ and $D$ may be harmonic conjugates with respect to $A$ and $B$.
Prove that any circle through $C$ and $D$ intersects orthogonally the circle described on $A B$ as diameter.

Or,
15. $5 b$. Having given three points in a harmonic range, construct a fourth point with the ruler only, and show that there are three solutions.
Calculate the length of $A D$ for the three cases, where the given points $A, B, C$ are in order in a straight line, and $A B=3^{\prime \prime}$, $B C \quad 2^{\prime \prime}$.
15. Verify one of the cases by means of an accurately drawn figure.

6a. $V$ is the vertex of a pyramid which stands on a quadrilateral base $A B C D$. Show that if $P Q R S$ be the points of intersection of a plane with $V A, V B, V C, V D$, the locus of the intersection of $P Q$ with $R S$ is a straight line through V .
If $A, B, C, D$ be concyclic points, find the centre of the sphere cireumscribing $V A B C D$.
Or,
6b. $A B, C D$ are two straight lines in space ; and from $A, B$, perpendiculars $A L, B M$ are drawn to $C D . \quad P, Q$ are two points in $A B$, and $A B$ produced, such that

$$
\frac{A P}{P B}=\frac{A Q}{B Q}=\frac{A L}{\overline{B M}}
$$

Prove that the planes $P C D, Q C D$ are at right angles to each other.

TRIGONOMETRY AND LOGARITHMS.
Honours Grade.
Thursday, 21 st June.-2 P.M. to 3.30 P.M.
All ordinary symbols and contractions are allowed.
All the steps of the proofs must be given.
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.

Additional marks will be given for neatness, good style, and accurately drawn figures.

Candidates may answer six questions only, namely, Nos. 1, 2, 3, and one of the alternatives in each of Nos, 4, 5, 6.
15.

1. If $\tan 2 A=x$, prove that

$$
\tan A=\frac{1}{x}\left( \pm \sqrt{x^{2}+1}-1\right)
$$

and explain the necessity for the double sign.
$A B C$ is a circle whose centre is $O$. The angles $A O B, B O C$ are each
$45^{\circ}$. The bisector of $A O B$ meets the tangent at $B$ in $D$; and
$D E$, drawn parallel to the chord $B C$, meet $A C$ in $E$. Prove that $A E=0 A$.
15.
2. Prove that

$$
(\cos \theta+i \sin \theta)^{n}=\cos n \theta+i \sin n \theta
$$

where $n$ is a positive integer, and $i^{2}+1=0$.
Find the exponential values of $\sin \theta$ and $\cos \theta ;$ and hence express $\sin ^{3} \theta \cos \theta$ in terms of sines of multiples of $\theta$.
15. 3. Find an expression for the distances between the centres of the circumscribed and inscribed circles.
If $r_{2}, r_{2} r_{3}$ be the radii of the escribed circles, prove that
(1) $r_{1}+r_{2}+r_{3}-r=4 R$,
(2) $\frac{1}{r_{1}}+\frac{1}{r_{2}}+\frac{1}{r_{3}}-\frac{1}{r}=0$.

Alternative Questions.
15. $4 a$. Find, from your tables, the values of $\sin ^{-1} x$ to the nearest degree when

$$
x=0, \pm 0 \cdot 1, \pm 0 \cdot 2, \ldots \pm \pm 0 \cdot 9, \pm 1
$$

and hence construct the graph of
$y=\sin ^{-1} x$, between the limits $y=-180^{\circ}, y=+180$, taking one inch horizontally to represent 0.5 and one inch vertically to represent $50^{\circ}$.
Or,
15.
$4 b$. Prove that the nine-points circle of a triangle touches the inscribed and escribed circles.
15. $5 a$. Prove that in any triangle

$$
\sin \frac{A}{\overline{2}}=\sqrt{\frac{(s-b)(s-c)}{b c}}, \quad \cos \frac{A}{2}=\sqrt{\frac{s(s-a)}{b c}}
$$

If $D, E$ are the points of contact of the sides $A B, B C$ with the inscribed circle of the triangle $A B C$, and if $D E$ meet $A C$ in $F$, prove that

$$
F C=\frac{b(a+b-c)}{2(c-a)}
$$

Or,
$5 b$. Find all the solutions of the equation

$$
\tan \theta+\tan 2 \theta+\tan 3 \theta=0
$$

15. $6 a$. Prove that

$$
\sin \theta=\theta-\frac{\theta^{3}}{\sqrt[3]{5}}+\frac{\theta^{5}}{5}-\cdots
$$

Assuming that $\pi=3 \cdot 14159$, use this identity to express $\sin 10$ correct to five decimal places.
Or,
15.

6b. Prove that

$$
\cos \theta, \quad \cos 2 \theta, \quad \cos 3 \theta, \ldots
$$

form a recurring series whose scale of relation is

$$
1-2 x \cos \theta+x^{2}=0
$$

find the generating function and deduce the expansion of $\cos n \theta$ in terms of $\cos \theta$.

# ELEMENTS OF DYNAMICS. 

Additional Mathematical Subject.

Tuesday, 26th June.-2 P.M. to 3.30 P.M.
10. All the steps of the proofs must be given, and the work of the calculations should be shown in full. Additional marks will be given for neatness, good style, and accurately drawn figures.

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.
13. 1. Explain the meaning of component and resultant velocities.

A ship is sailing northwards at the rate of 10 miles an hour. A sailor in the ship goes across the deck from a point on the west side to the opposite point on the east side at the rate of $5 \frac{1}{3}$ miles per hour. Find the velocity of the sailor relatively to the surface of the Earth, and show its direction by an accurate diagram.
13. 2. State the parallelogram of forces.
$A B C D$ is a given parallelogram, and $E$ is the mid point of $C D$. Find the resultant of the three forces represented by $B C, B E$, $E A$.
13. 3. Define acceleration.

A body moving in a straight line with uniform acceleration contrary to the direction of motion has at a certain instant a velocity of 420 feet per second. One minute later its velocity is 260 feet per second. Find the acceleration.

Find also in how much longer time the body will come to rest.
13. 4. Find the centre of gravity of a unifo:m triangular lamina.

Show that it coincides with the centre of gravity of three equal particles placed at its vertices.
13. 5. A body, acted on by a horizontal force, rests on a smooth inclined plane. Prove that the force bears to the weight of the body the same ratio that the height of the plane bears to its base.

A horizontal force equal to the weight of 5 pounds keeps a body weighing $5 \frac{1}{4}$ pounds at rest on a smooth inclined plane. Find the reaction of the plane.
13. 6. Describe and explain the action of a syphon in emptying a vessel, and show how a syphon may be employed so that a vessel into which water flows steadily may be emptied at intervals.
12. 7. A body weighs in air $7 \frac{1}{2}$ pounds, in water $5 \frac{1}{2}$ pounds, and in another liquid 6 pounds. Find the specific gravity of the liquid.

## HIGHER DYNAMICS.

## Additional Mathematical Subject.

(Honours:)
Tuesday, 26 th June. -2 P.M. to 3.30 P.M.
All the steps of the proofs must be given, and the work of the calculations should be shown in full.

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.
10. Additional marks will be given for neatness, good style, and accurately drawn figures.

Candidates may answer six questions only, namely, Nos. 1, 2, 3, and one of the alternatives in each of Nos. 4, 5, 6.
15. 1. Define the Centre of Gravity of a body, and show how to find the centre of gravity of a number of particles of given mass and position.
Prove that if the different particles be in motion in different directions with different speeds, each particle moving with uniform velocity, the centre of gravity is also moving with uniform velocity.
15. 2. Prove the parallelogram of forces.

Three beams $B C, C A, A B$, of lengths $3,5,4$ feet, are connected by smooth hinges at $A, B, C$. The ends of the beam $C A$ rest on pillars of equal height. The other two are in a vertical plane, $B$ being above $C A$, and a weight of 25 l bs. hangs from the hinge at $B$. If the weight of the beams themselves may be neglected, find the stresses in each beam and the reactions at $B$ and $C$.
15. 3. A particle is projected from a given point in a given manner. Determine its position at any time, and find its range on a horizontal plane through the point of projection in terms of the original horizontal and vertical velocities.
Two particles are projected at the same moment from a given point with any velocities whatever. Show that the distance between the particles increases uniformly with the time.

## Alternative Questions.

15. 4a. Define Work, and give the meanings of foot-pound, horse-power, dyne, and erg. Express an erg as a decimal fraction of a footpound, assuming 1 gram $=\cdot 0022$ pound, and 1 centimetre $=$ -0328 feet.

Or
15. 4b. Explain shortly what is meant by Kinetic Energy. State the relation between the mass, velocity, and kinetic energy of a body.

A particle of mass $M$ is let fall, and sinultaneously a particle of mass $M^{\prime}$ is projected upwards with a velocity of 96 feet per second. Find the ratio of $M$ to $M^{\prime}$ in order that after an interval of 6 seconds the two particles may have the same kinetic energy.
15. $5 a$ Prove that when a body is wholly or partially immersed in a fluid the resultant pressure of the fluid on the body is equal in amount but opposite in direction to the weight of the portion of the fluid displaced by the body.

A balloon contains 4,000 cubic metres of coal gas, of specific gravity 0.00052 . If the specific gravity of air be 0.00129 , and the weight of the envelope and car be 1500 kilograms, find what additional weight it will sustain. (A cubic centimetre of water weighs a gramme.)

Or
15. $5 b$. Find an expression for the pressure at a point in a liquid $n$ feet below the surface, if the pressure on the surface be $k$ lbs. per square inch, and the specific gravity of the liquid be $s$.

If the pressure in a water main exceed the atmospheric pressure by 40 lbs . per sq. in., find the greatest height to. which the water can rise above the main.
15. $6 a$. State the laws of friction.

A force $F$ keeps a mass $M$ moving up an inclined plane with constant velocity $v$. The inclination of the plane to the horizontal plane is $\alpha$, and $\mu$ is the coefficient of friction between the mass and the plane.

If $\mu=\tan \varepsilon$, prove that the rate at which $F$ does work is
$\frac{M g v \sin (\alpha+\varepsilon)}{\cos \varepsilon}$
Or
15. 6b. Forces act on a rigid body along the sides of a polygon taken in order the same way round, and respectively proportional to the lengths of the sides along which they act. Prove that the resultant of these forces is a couple proportional to the area of the polygon.

Forces represented by straight lines $A B, B D, D C, C A$ act on a rigid body along these lines, and are in equilibrium. Prove that $B C$ is parallel to $A D$.

## GEOMETRICAL CONICS.

## additional Mathematical Subject.

(Higher Grade and Honours.)
Tuesday, 26 th June. -4 P.M. to 5.30 P.M.
All ordinary symbols and contractions are allowed.
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.
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.
10. Additional marks will be given for neatness, good style, and accurately drawn figures.
15. 1. A triangle $A B C$ is cut out of paper, and is folded across so that the point $A$ falls on a point in $B C$. Prove that the crease is a tangent to the parabola of which the first position of $A$ is the focus and $B C$ is the directrix.
Find the point of contact of the crease.
15. 2. If $P$ be a point on a parabola of which $S$ is the focus, and $K$ be a point on the tangent at $P$, and if $K L$ and $K M$ be the perpendiculars from $K$ to $S P$ and the directrix, prove that $K M=S L$.
Hence, or otherwise, show how to draw a second tangent to the parabola from $K$.
15. 3. Two chords $P Q, R S$ are drawn in a parabola parallel to two fixed directions. If these meet in $O$, prove that the rectangle $P O \cdot O Q$ bears a fixed ratio to the rectangle $R O \cdot O S$.
Hence show that if a circle $P Q R$ cut a parabola in the points $P, Q, R, S$, the chords $P R, Q S$ are equally inclined to the axis of the parabola.
15. 4. If from the foci $S, S^{\prime \prime}$ of an ellipse $S L, S^{\prime} M$ are drawn perpendicular to the tangent at $P$, prove that $C L=C M=C A$, and $S L . S^{\prime} M=C B^{2}$, where $C A, C B$ are the semi-axes major and minor.
15. 5. Prove that any two tangents to an ellipse which are at right angles to each other intersect on a fixed circle.
Hence show that all rectangles which circumscribe an ellipse have their vertices in a fixed circle.
6. Define a hyperbola, and prove that it has two infinite branches.

If $S$ be the focus of a hyperbola, $P$ a point on the curve, $P M$ the perpendicular from $P$ to the directrix, $P^{\prime \prime}$ the point in which $P M$ produced meets the other branch of the hyperbola, prove that $S M$ bisects the angle $P S P^{\prime}$.

## ANALYTICAL GEOMETRY.

## Additional Mathematical Subject.

## (Higher Grade and Honours.)

Tuesday, 26th June.-12 Noon to 1.30 P.M.
10. All the steps of the proofs must be given. Additional marks will be given for neatness, good style, and accurate diagrams.
The co-ordinate axes may be assumed to be rectangular.
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.
15. 1. The co-ordinates of the vertices of a triangle are $(6,4),(5,2)$, $(2,3)$.
Find (1) the co-ordinates of the mid points of the sides, (2) the equations of the medians, (3) the co-ordinates of the point of intersection of the medians, illustrating your figure by a drawing to scale.
15. 2. Find an expression for the tangent of the angle contained by the straight lines

$$
y=a x+b, \quad y=c x+d
$$

Find $c$ in terms of $a,(1)$ when the lines are parallel, (2) when they make an angle of $90^{\circ},(3)$ when they make an angle of $45^{\circ}$.
15. 3. Prove that the equation

$$
a x^{2}+2 b x y+c y^{2}=0
$$

represents two straight lines through the origin.
Find the equation which represents two straight lines through the origin, one of which passes through the point $(1,2)$ and the other through the point $(3,1)$.
15.
4. Show that the equation

$$
x^{2}+y^{2}+a x+b y+c=0
$$

may be made to represent any circle by taking suitable. values of $a, b c$.
Find the equation of the circle which passes through the points $(1,1),(2,0),(3,3)$.
15.
5. Prove that the straight line

$$
y=m x+c \sqrt{1+m^{2}}
$$

touches the circle $x^{2}+y^{2}=c^{2}$ for all values of $m$.
Find the equations of the straight lines parallel to the line; $x+y=0$, which touch the circle, $x^{3}+y^{2}=8$; illustrating your answer by an accurate figure.
15
6. Find the equations of two circles, each of which touehes the axis $O X$ and also passes through the points $(1,2),(3,4)$.

## BOOK-KEEPING.

Friday, 22 nd June.-2 P.M. to 5 P.M.
25. Marks are given for writing, ruling and style.
101. 1. On 1st March, 1906, the Ledger Balances of John Logan, Weaver, were :-


Record the opening entries, the transactions, and closing entries in :-

$$
\begin{aligned}
& \text { Cash Book ; } \\
& \text { Invoice (or Goods Bought) Book; } \\
& \text { Day (or Goods Sold) Book; } \\
& \text { Journal. }
\end{aligned}
$$

Post from these to a Ledger.
Frame Profit and Loss Account for the quarter ending 31st May 1906, and a Balance Sheet as at 31st May 1906.

Only entries not suitable for the other books are to be entered in the Journal.
24. 2. (a) A.B. sold to C.D. goods invoiced at $£ 500$; C.D. returned $£ 20$ worth of the goods ; A.B. erroneously entered the latter transaction as if he had sold C.D. an additional $£ 20$ worth of goods.

Give the Journal entries required to put the matter right in A.B.'s books.
(b) On the 1st February 1906, A.B. bought from C.D. goods invoiced at $£ 100$, for which he gave C.D. his bill at $3 \mathrm{~m} /$ d. C.D. discounted the bill, the proceeds, $£ 98$ 15s., being credited to his bank account. When the bill became due, A.B. was unable to meet it, and C.D. had to take it up.

Record these transactions in C.D.'s Journal.

## COMMERCIAL ARITHMETIC.

First Paper.
Tuesday, 26 th June. -9.30 A.M. to 10 A.m.
This paper will be taken up at the end of half-an-hour, when the other 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.
$\underline{\text { Fill this in first }}\left\{\begin{array}{l}\text { Name of School } \\ \text { Name of Pupil }\end{array}\right.$
3. 1. Add the following sums of money, and subtract nine times the first line from your result :-

| $£$ | s. | $d$. |
| :---: | :---: | :---: |
| 176935 | 19 | $11 \frac{1}{2}$ |
| 89277 | 17 | $6 \frac{3}{4}$ |
| 618248 | 9 | $10 \frac{1}{2}$ |
| 975649 | 17 | 6 |
| 419365 | 13 | $4 \frac{1}{2}$ |
| 987349 | 9 | 8 |
| 126534 | 18 | $10 \frac{1}{6}$ |
| 969417 | 11 | 11 |
| 876994 | 19 | $8 \frac{1}{4}$ |

9829. 
9830. 2 Write down the values of-
$234716953 \times 11$
$417296534 \times 25$
$643917258 \times 12$
$2716 \times 34-$
$654678228 \div 12$.
$321936575 \div 25$
$47149625 \div 125$.
$\qquad$
9831. 3. Calculate the following percentages :-

| $5 \%$ of $£ 416932$ |  | - | - | - |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $4 \%$ of $£ 391165$ |  | - | - | - |  |
| $2 \frac{1}{2} \%$ of $£ 624163$ | - | - | - | - | - |
| $12 \%$ of $£ 6735$ |  | - | - |  |  |
| $95 \%$ of $£ 14500$ |  | - | - |  |  |

6. 4. Write down the cost of -

784 articles at 13s. 4 d. each
6 tons 16 ewts. 2 qrs. at $£ 1210$ s. per ton 260 yards at $2 d$. per inch

3. 5. Express-


1. 6. What is the remainder when the following number is divided
by 9 ?

3721845023465


## COMMERCIAL ARITHMETIC.

## Second Paper.

Tuesday, 26th June.-10 A.M. to 11.30 A.M.
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.
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.
7. Marks are given for neatness, arrangement, and style.

Algebraical symbols may be used if properly explained.
8. 1. Express in kilograms the weight of 447 hektolitres of a liquid weighing $1 \cdot 2$ grams per eubic contimetre. (A litre is a cubic decimetre.)
8. 2. A cistern is 4 feet 3 inches long, 3 feet 9 inches broad, 2 feet 8 inches deep (internal measurement), find how many cwts. of water it contains, assuming that a cubic foot of water weighs 1000 ounces.
7. 3. A firm owes another firm $£ 1000$ due 6 months hence, $£ 500$ due 4 months hence, and $£ 250$ due 3 months hence, find at what time a single payment of $£ 1750$ will equitably liquidate all three debts.
12. 4. Explain the method by which sums less than $£ 1$ can be rapidly expressed as decimal fractions of $£ 1$.
Express the following items as decimals of a pound correct to three places, add them as decimals, and bring the answer to pounds, shillings and pence :-

6 s. $11 \frac{1}{2}$ d., $13 \mathrm{~s} .7 \frac{3}{4} d$., 10 s. $6 d$., 3 s. $4 \frac{1}{4}$ d., 9 s. $3 \frac{3}{4} d$.
Test your result by adding the items in the ordinary way, and explain any discrepancy.
7. 5. A company has issued the following stocks and shares :-
$£ 200003 \frac{1}{2}$ per cent. Debenture Stock,
$£ 25000$ 4 12 per cent. Preference Stock,
100000 ordinary shares of $£ 2$ each.

If the net profits in a certain year be $£ 12825$, find what rate per cent. of dividend can be paid on the ordinary shares.
8. 6. A man invested a sum of money in a $3 \frac{1}{2}$ per cent. Stock when it stood at $£ 12$ above its par value (100), and sold it 10 years later at $£ 12$ below par, receiving $£ 600$ less than he paid for it. Find the amount of stock he bought, and the annual income he received from it. (Disregard brokerage and other expenses of buying and selling.)
7. 7. What is meant by saying that Great Britain adopts a gold standard for its currency?
Explain why 20 shillings can always be exchanged for a sovereign although the price of silver varies.
11. 8. A London merchant owes 5942 dollars payable in New York to a merchant there. The latter draws a bill on the London merchant at 30 days' sight in sterling. If the rate of exchange for 30 days' sight drafts be 4.85 dollars for $£ 1$, find the amount of the bill to the nearest penny.
If he had drawn the bill at 60 days' sight, would the rate of exchange as expressed in dollars per pound sterling be greater or less? Give a reason for your answer.


[^0]:    9829. 
[^1]:    * The Values printed in brackets are those assigned for Honours.

[^2]:    * Take Tommy under his care: s'occuper de, or se charger de Tommy.

