SUPPLEMENT TO THE

CEYLON GOVERNMENT GAZETTE

No. 7,820 FRIDAY, DECEMBER 19, 1930.

REGULATIONS FOR CAMBRIDGE JUNIOR AND SENIOR SCHOOL CERTIFICATE EXAMINATIONS, DECEMBER, 1931.

Date and place of Examination.

1. Examinations for the Cambridge Junior and Senior School Certificate will be held at Batticaloa, Chulipuram, Colombo*, Galle, Jaffna*, Kandy, Manipay, Moratuwa, Mount Lavinia†, Negombo, Panadure, Point Pedro, Uduvil‡, and Vaddukkoddai, commencing December 4, 1931. Candidates must enter for the Examination at the centre nearest to their school and will under no circumstances be allowed to sit at another centre.

Schools presenting pupils for practical Science Examinations must provide themselves with properly equipped laboratories sufficient for all their candidates.

Conditions. Approved school.

2. Only candidates who have for four months been pupils of schools§ accepted for this purpose by the Education Department, Ceylon, may enter for these examinations. Schools whose results for two successive years are not satisfactory in the opinion of the Director may be taken off the list of accepted schools.

Qualifying tests for Senior Examination.

3. No candidate may enter for the Senior Examination until twenty months have elapsed since he was promoted from the Cambridge Junior or E. S. L. C. or equivalent class, unless he has obtained a First Division at the E. S. L. C. or passed the Cambridge Junior with Honours.

Additional subjects.

4. Students *who already hold a Senior (or Junior) Certificate* and desire to pass in one or more additional subjects may enter at a subsequent Examination for less than the minimum number of subjects necessary for a certificate, provided they continue to attend an accepted school. The names of such students will not appear in the Class Lists, but if in the Junior Examination they pass in any subject, or, in the Senior Examination, they obtain a Pass with Credit in any subject (or, having previously passed with Credit in subject 12, in a portion of subject 23) they will receive Supplementary Certificates.‖ The entrance fee in either case will be Rs. 17, provided that not more than six papers in all are taken. Supplementary Certificates will not be awarded to candidates who have not stated in their forms of entry that they are candidates for Supplementary Certificates only.

Form of entry.

5. Forms of entry may be had from the Director of Education in the first week in June. It is requested that Principals of schools will apply only for the number of forms of each kind (C, D, E, or F) that they *actually* require.

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* At Colombo there will be Centres at Ananda College, Nalanda Vidyalaya, Royal College, St. Benedict's College, St. Joseph's College, St. Peter's College, and Wesley College; and at Jaffna at Central College, Parameshwara College, St. John's College, Hindu College, and St. Patrick's College, mainly for the convenience of boys from those schools.

† For boys only.

‡ For girls only.

§ Certificates showing the name of the school attended will be issued only to passed candidates who have attended approved schools for three years up to the date of Examination. Certificates issued to other passed candidates will not mention the name of the school.

‖ A senior candidate passing with Credit in a portion of a subject only will not receive a Supplementary Certificate, but information will be furnished on request for the use of any Public Body.

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The names of candidates must be sent by the Principal of school on these forms to the Director of Education so as to reach him not later than June 30, 1931. The forms must be accompanied by—

Annexures.

(i.) Bank receipt for the fees credited * to the Examination Fund account of the Director of Education in the Chartered Bank of India, &c., Colombo, at the rate of Rs. 24 for each Junior and Rs. 28 for each Senior candidate entered. No separate fee is charged for detailed results.

N.B.—This amount should not, under any circumstances, be remitted to this office; only bank receipts will be accepted.

(ii.) A complete list of pupils in the Junior Certificate class and the Second Year Senior Certificate class.

(iii.) A certificate of birth or of baptism for every candidate. Any candidate whose birth has not been registered will be accepted as an overage candidate on production of a proper affidavit, which should also state that the birth has not been registered.

When certificates have been registered in the Education Office reference may be given to the registered numbers of these certificates.

If the name appearing in the register of Births differs, either by alteration or by addition, from the name by which the candidate is known, the parent or guardian should, before forwarding the certificate, apply to the Registrar-General for such alterations in the manner see forth in section 21 of Ordinance No. 1 of 1895, as amended by Ordinance No. 23 of 1900.

A certificate of baptism should be an exact copy of the entry in the Baptismal Register, and should be certified a true copy by the incumbent of the church issuing it. Baptismal Certificates will be accepted only if the candidate was baptized within six months of birth.

Late entries.

6. Forms of entry will be accepted from July 1 to July 7, inclusive, provided an additional fee of Rs. 5 for each candidate so entered has been paid to the Examination Fund account of the Director of Education.

All entry forms received at the Education Office not accompanied by the necessary annexures (*vide* paragraph 5) will be rejected.

N.B.—Applications from Candidates whose Entry Forms are Incomplete or Incorrect may be Rejected.

Withdrawals.

7. Fees cannot be returned. If notice of withdrawal is received more than sixteen days before the commencement of the examination, a voucher will be sent entitling the candidate, or (on application from an approved school) another pupil of the school, to count towards a subsequent examination the University fee already paid. The Syndicate do not undertake to grant a voucher if the full sixteen days' notice has not been given. Applications made later will, however, be considered if accompanied by a medical certificate stating that the candidate is physically unfit to take the examination, provided that they reach this office by Wednesday of the examination period, and that the candidate has not actually sent up answers to any of the papers. Candidates holding vouchers must apply for fresh forms of entry and return the vouchers to the Director of Education on or before June 30, 1931, together with the necessary documents. No voucher may be presented on more than one occasion, nor can a second voucher be issued in respect of the same fee.

8. Candidates who are suffering from any infectious disease are not permitted to present themselves for examination.

9. Candidates are warned that if they be found resorting to unfair means at the examination, they will be summarily expelled from the Examination Hall, and further they will be debarred from entering for any public examination for a period of years.

Studentships.

Three studentships at the University College will be awarded on the results of the Senior School Certificate Examination, two for boys and one for girls, who pass highest in the examination, provided—

(i.) The pass qualifies the candidates for exemption from the London Matriculation Examination;
(ii.) The candidate is under 19 years of age at the date of the examination, and has not sat for the London Intermediate or the Matriculation Examination; and
(iii.) The candidate's parents are not in receipt of an annual income exceeding Rs. 6,000 from all sources.

These studentships shall be tenable for two years, but may be extended over a third year if the conduct and progress of the holder have been satisfactory.

N.B.—No candidate shall be allowed to hold a free studentship in addition to an open scholarship or exhibition at the University College.

Prizes.

The following prizes will be awarded on the results of the *Senior* School Certificate Examination:—

(1) A prize of Rs. 50 offered by the Society for the Encouragement of the Study of Pali Literature, Colombo, to the candidate who does best in *Pali*, provided he gains a distinction in the subject and also obtains a pass in the examination as a whole.
(2) A prize of Rs. 60 entitled "The Sir William Manning Prize" offered by the Committee appointed to deal with "Governor Manning's Reception Fund" in Batticaloa, to the candidate who passes the examination from a school in Batticaloa District obtaining highest marks in English. This prize will be open only to candidates whose parents have permanent interests in the district.

Education Office,
Colombo, December 15, 1930.

L. Macrae,
Director of Education.

JUNIOR SCHOOL CERTIFICATE EXAMINATION.

There is no age limit for candidates, but those born before December 15, 1915, will not be eligible for Honours or for marks of distinction.

Requirements for the Certificate:

To qualify for the certificate candidates must at one and the same examination satisfy the Examiners in—

(1) Writing from Dictation.†
(2) Arithmetic.†
(3) English Language and Literature.
(4) A subject from Group I. or II. (given below).
(5) A subject from Group III. (given below).
(6) At least one additional subject from any of the Groups I.–IV. (given below).

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* Remittances to Bank should accompany the form giving particulars of the payment. This form may be had on application to this office.

† In the award of certificates compensation for a failure in Dictation may be allowed when a candidate passes in English Composition and any one other paper in the subject English Language and Literature. For a failure in Arithmetic, compensation may be allowed when a candidate passes in the subject Mathematics. In every such instance the mark actually gained in Dictation or in Arithmetic will be taken into account.

No candidate may enter for papers in more than 7 subjects apart from Dictation, Arithmetic, and English Language and Literature.

Group I.—(1) Religious Knowledge.
(2) History.
(3) Geography.
Group II.—(4) Latin.
(5) Greek.
(6) French.
(7) German.
(8) Spanish.
(9) Dutch.
(10) Sinhalese.
(11) Tamil.
(12) Pali.
Group III.—(13) Mathematics.
(14) Experimental Science.
(15) Chemistry.
(16) Physics.
(17) Botany.
(18) Natural History of Animals.
(19) Hygiene with Elementary Physiology.
Group IV.—(20) Drawing.
(21) Music.
(22) Needlework.

Candidates should pay special attention to **Handwriting** and to the neatness of their work; they are warned that illegible writing and untidy answers involve a loss of marks. Composition will be taken into account.

SYLLABUSES.

2. ARITHMETIC:

The use of algebraical symbols and processes is permitted. Questions will not be set on recurring decimals, on the process of obtaining G. C. M. by alternate division or of extracting cube root, on present worth or true discount. Questions will be set on elementary mensuration; these may involve the use of formulæ for the right-angled triangle, circle, circular cylinder, circular cone, sphere, right prism, pyramid. Candidates will be expected to give from memory only the formulæ for the triangle and the circle. They are also expected to know the following tables of weights and measures, namely, avoirdupois, linear measure, square measure, capacity (pints, quarts, gallons); and in the metric system, the metre, the gramme, and the litre, with their multiples and sub-multiples. Questions may be set involving the franc and the centime, the dollar and the cent.

N.B.—Tables of logarithms may not be used.

3. ENGLISH LANGUAGE AND LITERATURE:

(*a*) *English Composition.*—Exercises, including an Essay, to test the power to write clear and grammatical English and to spell correctly.
(*b*) *Shakespeare, A Midsummer Night's Dream.**
(*c*) *Tennyson, Coming of Arthur and Passing of Arthur.**
(*d*) *Stevenson, Treasure Island.*
(*e*) *English Authors:* Questions of a general not a detailed character, on *Modern Poetry* (*ed., Pocock: Dent, King's Treasuries*), *Parts I. to VII., and Peacock, Maid Marian* (*ed. Cavenagh: Macmillan*).
(*f*) *English Grammar*, including parsing and the analysis of sentences.
Candidates must *either* satisfy the Examiners in Composition and in one of the literature papers (*b*), (*c*), (*d*), (*e*), *or* reach a certain lower standard in Composition and satisfy the Examiners in two of the papers (*b*)–(*f*). To gain the mark of distinction they must reach a certain standard in three papers. Three papers in all may be taken.
Throughout the section importance will be attached to clearness and correctness of style.

GROUP I.

(1) RELIGIOUS KNOWLEDGE: (N.B.—The Revised Version of the Bible will be used.†)
(*a*) The Gospel according to *St. Mark*; additional credit will be given for satisfactory knowledge of the Greek.
(*b*) *Joshua* i.–xi., xxii.–xxiv., *Judges* i.–xii.; *or* Old Testament History from the election of Saul to the death of Solomon.
(*c*) The *Acts of the Apostles* i.–xv.
(*d*) The Church Catechism, and the Offices for Baptism and Confirmation in the Book of Common Prayer.
Candidates must satisfy the Examiners in (*a*), and in one other paper; all papers carry equal credit. No candidate will be examined in more than two papers.

(2) HISTORY:

(*a*) Outlines of the HISTORY OF ENGLAND.—The paper will consist of four sections on the periods (i.) A.D. 1066–1485; (ii.) 1485–1688; (iii.) 1688–1815; (iv.) 1815–1914, respectively. Candidates may answer questions from any one or two of these sections.
(*b*) Outlines of the HISTORY OF THE BRITISH EMPIRE.—The paper will consist of two sections on the periods—(i.) A.D. 1558–1763, (ii.) 1763–1914. Candidates may select questions from either or both of these sections.
(*c*) Outlines of ROMAN HISTORY from B.C. 90 to A.D. 14.
No candidate will be examined in more than one of the three divisions (*a*), (*b*), (*c*).

(3) GEOGRAPHY:

(i.) *General World Geography, including map work.*—Study of the globe. The distribution of land and water. Size, shape and movements of the earth. Latitude and longitude. Descriptive studies of the principal highland and lowland regions. Types of climate. Prevailing winds. The distribution of rainfall and temperature. The distribution of natural forest-land, grass-land, and desert. Different types of regions, such as equatorial forests, hot deserts, tundra, temperate grass-lands, &c., with special reference to the life of man.
Map Study. The use and reading of maps, *e.g.*, the six-inch and the one-inch sheets of the local Ordnance Map.
(ii.) *An elementary knowledge of the Geography of any* **two** *of the six continents.*—Candidates may substitute the British Isles for any one continent. Candidates at Overseas Centres are advised to study the Geography of their own continent.
Section (ii.) is it to be treated on the lines broadly indicated in the following note:—
Three questions will be set on Section (i.) of the above syllabus and three questions in Section (ii.) on each of the continents and on the British Isles. Candidates will be required to answer five questions taken from not more than three parts of the paper, one of which must be Section (i.), and including not more than two questions from any one part.

Note.—Questions will be set on the assumption that special attention has been directed to the inter-relations between the life of man and his physical environment. Therefore, in each region studied, the mode of life of the people, their distribution and occupation, should be taught in relation to such physical data as position, relief, climate, natural vegetation, mineral wealth, &c. The position of important towns, methods of transport, and means of communication should receive similar treatment.
Pupils should be trained to draw sections, sketch-maps, and diagrams to explain or illustrate the written parts of their answers. They may be required to insert geographical features or to indicate distributions (*e.g.*, rainfall, coalfields, population) on outline maps.

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* Candidates may be asked to write out a short passage by heart. For list of Shakespeare passages see footnote † on page 8.
† In New Testament subjects special papers will also be set on the Douay Version; candidates must indicate on their forms of entry that they wish to take these papers.

GROUP II.

(4) LATIN :

Two papers will be set. Paper I. will include (1) questions on grammar and parsing ; (2) one or more easy unprepared passages for translation into English, a vocabulary of the less familiar words being given ; (3) simple sentences for translation into Latin ; (4) an easy continuous passage for translation into Latin.

Paper II. will contain (*a*) passages for translation from selected books, with questions, and (*b*) *as alternatives*, to either or both of the portions of set books, unprepared passages for translation into English, with questions.

The selected books for 1931 are *Caesar, de Bello Gallico I.*, and *Virgil, Aeneid I.* Candidates may take any two, but not more than two, of the following portions of these books :—(i.) *de Bello Gallico I.*, 1–29 ; (ii.) *de Bello Gallico I.*, 30–54; (iii.) *Aeneid I.*, 1–401 ; (iv.) *Aeneid I.*, 305–756.

Candidates must satisfy the Examiners separately in Paper I. and in the subject as a whole. To gain the mark of distinction they must reach a higher standard, both in the subject as a whole and in Paper I.

(5) GREEK :

Two papers will be set. Paper I. will include (1) questions on grammar and parsing ; (2) one or more easy unprepared passages for translation into English, a vocabulary of the less familiar words being given ; (3) simple sentences for translation into Greek.

Paper II. will contain (*a*) passages for translation from selected books, with questions, and (*b*) *as alternatives*, to either or both of the portions of set books, unprepared passages for translation into English, with questions.

The selected books for 1931 are : *Xenophon, Anabasis VI.*, and *Aeschylus, Prometheus Vinctus*. Candidates may take any two, but not more than two, of the following portions of these books :—(i.) *Anabasis VI.*, 1–3 ; (ii.) *Anabasis VI.* 4–6 ; (iii.) *Prometheus Vinctus* 1–560 ; (iv.) *Prometheus Vinctus* 526–1093.

Candidates must satisfy the Examiners separately in Paper I. and in the subject as a whole. To gain the mark of distinction they must reach a higher standard, both in the subject as a whole and in Paper I.

(6) FRENCH. (7) GERMAN.* (8) SPANISH. (9) DUTCH :

Each paper will include (1) questions on grammar ; (2) unprepared passages for translation into English ; (3) sentences for translation into the language ; (4*a*) one or more passages for translation into the language ; and (4*b*) as an *alternative*, a subject or subjects for a short essay in the language.

Candidates must reach a certain standard in the subject as a whole. For the mark of distinction they must reach a higher standard in the subject as a whole, and must also reach a certain standard in (2) and in (4). Marks gained in the *Oral Examination* will be taken into account in borderline cases and at the distinction level. Failure in oral work will not prejudice the result in the written papers.

SPOKEN FRENCH AND SPOKEN GERMAN.

The Oral Examination is optional ; it may be taken only by candidates who also enter for the written examination in the same language. Success in the oral test will be shown on the certificate independently of the result in the written examination and will also compensate for a slight deficiency in written work.

The oral examination will not be necessary for passing in the language or for the mark of distinction. In the Senior Certificate Examination, high marks gained in the Oral Test will be accepted as compensating for a slight deficiency in the written examination in the language, for the award both of a pass with credit and of the mark of distinction. In the Junior Certificate Examination, the result of the Oral Test will be taken into account for the award of the mark of distinction in the language.

Candidates will be required (1) to read aloud a passage in the language ; (2) to write from dictation a passage in the language ; (3) to hold a short conversation in the language with the Examiner. At the discretion of the Examiner the conversation may be partly based on the reading passage or on a picture or series of pictures. Candidates may also be invited to recite any piece of verse which they have learnt by heart. A book may no longer be offered as a basis for the conversation test.

The oral examination can be held in Colombo only. The fee is Rs. 5 per candidate (the minimum payable by any school or by a private candidate being Rs. 15 for each language).

(10) SINHALESE : †

Two papers will be set. Paper I. will include questions on the set books.

Paper II. will include questions on grammar, unprepared translation from Sinhalese into English and translation into Sinhalese (composition).

The selected books‡ for 1931 are : (1) Saddharmalankara.—The following Wargas :—(*a*) Bodhirāja Warga (Bodhirāja Sraddasumanā Dhammasawanopāsika, Kuddarajja and Migapōtaka Katavastus) ; (*b*) Arannaka Warga (Arannaka Abhayasthavira, Samanagāma, Nāga, Uttaroliya and Puwababbathavāsitissa Sthavira Katavastus) ; (*c*) Kākāwarna Warga (Kākāwarna, Duttagāmini, Nandimitra, Suranirmala, and Mahāsona Katavastus).

(2) Dahamsonda Kavya.

Candidates must reach a certain minimum in Paper II. taken as a whole, and a higher minimum in Papers I. and II. taken together. To gain the mark of distinction they must reach a higher standard in the subject as a whole, and must also reach a certain standard in translation and composition.

(11) TAMIL : †

Two papers will be set. Paper I. will include questions on the set books.

Paper II. will include questions on grammar, unprepared translation from Tamil into English and translation into Tamil (composition).

The selected book for 1931§ is a new Tamil reader by N. R. Subramania Sarma (E. M. Gopalakrishnakone, Madura. 10 annas. Poetry : Lessons I.–VII., XI., and XII. Prose : The whole.

Candidates must reach a certain minimum in Paper II. taken as a whole, and a higher minimum in Papers I. and II. taken together. To gain the mark of distinction they must reach a higher standard in the subject as a whole, and must also reach a certain standard in translation and composition.

(12) PALI :

Two papers will be set. Paper I. will include (1) questions on grammar and parsing ; (2) one or more easy unprepared passages for translation into English ; (3) simple sentences for translation into Pali ; (4) an easy continuous passage for translation into Pali. Paper II. will contain (*a*) passages for translation from the selected book, with questions, and (*b*) as alternatives to the selected book, unprepared passages from translation into English.

The selected book‖ for 1931 is :—

" Rasavahini—Mahasena Vaggo " (the 4th varga).

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* In writing German, the use of German characters will not be required, but credit will be given for it, provided that the writing is well formed and legible.

† Answers to questions in Sinhalese and Tamil will be accepted either in English or in the Vernacular where either language would be equally suitable.

‡ Selected books in Sinhalese for 1932 :—Prose : Ummagga Jataka from Kakantaka Prasna to end of Pancha Pandita. Verse : Buduguṇalankaraya—Verses 113–261.

§ The Selected books in Tamil for 1932 are :—Poetry : Ramothantham by A. Coomaraswamipillai, Chunnakam, Jaffna. Annas 3. Prose : Studies in Silappathigaram–Silappathigara Nool Nayam (the whole) by R. P. Setupillai, Ottrumai office, Saidapet, Madras. Re. 1 8A.

‖ The selected book in Pali for 1932 will be " The 5th Vagga of Rasavahini (10 stories).

GROUP III.

(13) MATHEMATICS :

Mathematical tables* will be supplied, except for Geometry ; candidates should bring graduated rulers and protractors.

(*a*) GEOMETRY. *Attention is called to the General Instructions and Schedules given in Appendix I.*

The paper will consist of two parts, each containing questions on Practical and on Theoretical Geometry. Candidates can pass in Geometry by doing sufficiently well in Part I. The use of algebraical symbols is permitted.

PART I.—Questions will be set on Schedules A (i.), A (ii.), and B (i.), B (ii.).
Candidates will also be expected to be acquainted with the forms of the simpler solid bodies, namely, the cube, the rectangular block, the tetrahedron, the sphere, the circular cylinder, the wedge, the pyramid, and the circular cone.

PART II.—Questions will be set on Schedules A (iii.) and B (iii.).

(*b*) ALGEBRA.—The paper will include questions on both Part I. and Part II. of the following Syllabus. Squared paper will be provided. Candidates can pass in Algebra by doing sufficiently well in Part I.

PART I.—Questions may be set on elementary algebraic operations ; simple equations ; simple simultaneous equations containing not more than two unknown quantities ; easy problems leading to such equations ; resolution into factors ; easy fractions ; quadratic equations containing only one unknown quantity, problems leading to such equations. Simple questions may be set on fractional and negative indices (formal proofs not being required), and on the elementary theory of logarithms. Calculation by means of logarithms to base 10, with the use of four-figure tables, may be required. Questions may be set on graphs and their applications. (Credit will be given for arithmetical solutions of any questions not necessarily requiring algebraical work.)

PART II.—Questions may be set on the solution of two simultaneous equations, one being linear and one being quadratic ; variation ; the gradient of a graph ; arithmetical progression and finite geometrical progression.

(*c*) PLANE TRIGONOMETRY,* including the solution of triangles and the use of logarithms. Addition theorems. Questions will not be set involving angles greater than 360 degrees. Some of the questions will be limited to easy numerical Trigonometry.

(*d*) ELEMENTARY APPLIED MATHEMATICS.*—Questions may be set on the composition and resolution of forces acting in one plane at a point, including their graphical representation ; parallel forces ; moments of forces about a point ; the properties of the centre of gravity ; simple applications to the lever, the common balance, the inclined plane, and the block-and-tackle ; the composition and resolution of velocities and accelerations in one plane ; rectilinear motion with uniform acceleration, including motion under gravity ; mass, momentum, dynamical measure of force. Formal proofs of the parallelogram of forces, of the parallelogram of velocities, and of the method of obtaining the resultant of two parallel forces will not be required.

To pass in this subject candidates must satisfy the Examiners in any *two* papers (*a*), (*b*), (*c*), (*d*). To gain the mark of distinction they must take at least *three* papers.

(14) †EXPERIMENTAL SCIENCE.‡

Students will be expected to show that they have acquired a practical acquaintance with the elements of physical and chemical measurement, and with the properties of common substances as ascertained by simple experiments. Three papers will be set, one of which will be a practical examination. All three papers must be taken.

The following is a syllabus of the work required :—

PAPER I.

The practical methods of measuring lengths, areas, and volumes. Comparison of scales. The use of squared papers.
Weight, the spring balance, the use of the common balance, including the method of obtaining the true weight of a body with an ill-adjusted balance by methods of substitution.
Experiments with pendulums to show the influence of the length of string, the weight of the bob, and the amplitude of vibration respectively on the time of swing.
The differences between solids, liquids, and gases.
Experimental verification of the principle of Archimedes.
Determination of densities and specific gravities. Experiments to illustrate the pressure of the air.
Measurement of force ; the parallelogram of forces ; the resolution of forces by graphical methods ; equilibrium of three forces illustrated by experiments. Experiments with levers to illustrate the action of parallel forces and the principle of moments. Centre of gravity ; the determination of the position of the centre of gravity of a plane lamina by calculation and by experiment. Simple machines, the principle of work.
Measurement of pressure in a liquid ; the barometer.
The principle and construction of the thermometer, determination of melting and boiling points, changes of volume of gases with variations of temperature and pressure, the measurement of specific and latent heats by the method of mixtures.

PAPER II.

Common laboratory operations, such as evaporation, crystallization, filtration, and distillation. The construction of apparatus for simple experiments, including the collection of gases.
The changes that occur when substances are heated. The chemistry of air, oxygen and nitrogen, rusting and burning. Water and hydrogen, carbon, carbon dioxide, chalk, and lime. General properties of acids and alkalis ; neutralization, common salt and saltpetre.
The examination of common elements and compounds, and the description of their chemical and physical properties. Quantitative examination of simple chemical changes, including the determination of volumes of gas given off when metals and carbonates are treated with acids.

PAPER III. (*Practical Examination.*)

Simple experiments on the subjects included in Papers I. and II. *Special importance will be attached to the methods by which the results are obtained.*

N.B.—For Papers I. and III. candidates should provide themselves with a pair of compasses, a rule graduated to millimetres, a pair of set squares, and a protractor.

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* Tables of logarithms of numbers will be printed on the back of the question paper in Algebra. The tables which will be provided for the examination in other subjects are the Cambridge Four-Figure Mathematical Tables containing logarithms of numbers of sines and cosines of tangents and cotangents ; sines and cosines, tangents and cotangents. Copies can be obtained from Syndicate Buildings, Cambridge, price three pence, post free.

† Candidates will be provided with mathematical tables in all papers in Experimental Science, Chemistry and Physics ; they may bring their slide rules in the practical examination in Chemistry and Experimental Science.

‡ To pass in any Science section, candidates must satisfy the Examiners in both the theoretical and practical parts of the subject. The Science subjects can be taken at those Centres only at which a suitable laboratory and apparatus can be provided. A special local fee may be charged.

(15) * CHEMISTRY † (see APPENDIX II.)
(*a*) THEORETICAL CHEMISTRY.
(*b*) PRACTICAL CHEMISTRY.

To pass in this subject, candidates must satisfy the Examiners in the subject as a whole, and separately in each of the two papers. No candidate may take Practical Chemistry only.

(16) PHYSICS † (see APPENDIX III)
(*a*) Experimental mechanics (may not be taken with (13*d*)).
(*b*) HEAT.
(*c*) SOUND AND LIGHT.
(*d*) ELECTRICITY AND MAGNETISM.

Questions will be set principally to test knowledge of the subject as gained from a course of experimental instruction. To pass in this subject, candidates must satisfy the Examiners in two of the four papers (*a*), (*b*), (*c*), (*d*).

(17) BOTANY‡ (see APPENDIX IV)
(18) NATURAL HISTORY OF ANIMALS‡

INTRODUCTORY OBSERVATIONS :

The formative value of Natural History lies (1) in encouraging a habit of observation, (2) in developing the power of comparison and the habit of looking for reasons for the differences between things. The teacher should therefore take care (1) that the animals, so far as possible, be seen, handled, and watched alive by his pupils, who should especially be warned that imagination is no substitute for observation in regard to the habits of the creatures ; (2) that the connection between the bodily structure of each animal and its mode of life be pointed out. It is well to bear in mind also that things shown are more easily understood and make a more permanent impression on the mind than things merely told.

In section 1, the human skeleton, if available, or the skeleton of a rabbit, dog, or cat should be studied.

In section 2, the skeleton of a fowl or pigeon should be studied, but both here and in section 6 formal lessons should not be given on those parts of the subject which students will learn better by personal observation and collecting or photographing. Lectures on such subjects as warning and protective colouration will be of value. Many of the aquatic forms can be well observed in an aquarium. Insects should be reared when this is possible, and in the case of all the animals every opportunity should be taken of observation in the field.

The Syndicate are prepared to recommend text books to teachers. Application may be made to the General Secretary.

SYLLABUS :

1. The general structure of a mammal and an elementary knowledge of the functions of its chief organs.

The more important characteristics, as regards form and habits, of the following mammals :—Monkeys, Bats, Moles, Hedgehogs, Carnivores, Ungulates, Whales, Rodents, Marsupials.

2. The external features of a Bird, and such details of anatomical structure as are connected with the power of flight.

The principal diversities in external form and habits characteristic of the main groups of Birds.

The eggs, nesting and singing habits, and migration of common Indian ‡ species.

3. The external features, life history, and habits of a Frog.
4. The external features and mode of life of a Fish.
5. The external features and mode of life of a Snail, a Cockroach, and an Earthworm.
6. The life history of a Moth or Butterfly.

The distribution and habits of the better known Indian ‡ species of Moths and Butterflies.

Elementary questions may also be asked with regard to very common insects of other orders.

Students will not be expected to cover the whole schedule, and the paper will contain more questions than the candidates are allowed to answer. Importance will be attached to evidence of personal observation on the part of the candidates.

(19) HYGIENE WITH ELEMENTARY PHYSIOLOGY.

Cleanliness.—The importance to health of cleanliness of :

(i.) person and clothing : washing ; care of the teeth and hair ; the action of soap.
(ii.) surroundings : methods of disposal of house refuse in town and country.
(iii.) food : the importance of food being protected from dust and flies in a well-ventilated and cool place.

Water.—A plentiful supply essential for cleanliness. Common mineral and organic impurities in water. Hard and soft waters ; the softening of hard water and its reaction with soap ; the action of soft water on lead. Filtering and boiling as simple methods of purification. Diseases caused by impure water.

Ventilation.—The effect on the air of rooms of the occupants and of various methods of heating and lighting. The effect on the body of impure and stagnant air. The main principles involved in ventilating a room.

Sunlight.—The importance of sunlight in health.

Infection, Disinfection, &c.—Simple facts concerning common infectious diseases. Insects as carriers of disease. Common methods of disinfection.

A simple outline of the structure of the human body to bring out an understanding of the following :

The Circulatory System.—The distributing system of the body ; the distribution of oxygen, food materials, &c., by the blood and the removal of waste from the tissues.

Respiration.—A comparison of atmospheric and expired air ; the function of the lungs.

Nutrition and Excretion.—Why food is necessary ; bodybuilding foods, fuel foods, protective foods (vitamins), mineral salts ; some common examples of different types of foods ; the importance of a mixed and varied diet ; the advantages and disadvantages of cooking food ; why digestion of food is necessary. The importance of a supply of pure water for drinking ; water essential for removal of waste materials from the body and for the regulation of body temperature. The functions of the large intestine, kidneys, lungs, and skin in eliminating waste.

Exercise and Rest.—Reasonable and regular exercise essential for normal development and health ; the importance of sufficient rest and sleep.

Body Temperature.—How it is regulated ; the importance of (i.) healthy atmospheric conditions and (ii.) suitable clothing.

The Nervous System.—A very simple outline of the action of the nervous system in co-ordinating the activities of the body.

GROUP IV.

(20) DRAWING :

(*a*) OBJECT DRAWING.—The group will consist of one or two of the following solids:—The cube, square prism, cylinder, cone, triangular prism, square pyramid, hexagonal prism, and ring ; together with some common object (or objects) and a drawing board. The group is to be drawn in outline with pencil and may be lightly shaded in pencil.

(*b*) MEMORY DRAWING.—Drawing from memory in any medium an object which will be shown to candidates for three minutes and then removed.

(*c*) FLAT DRAWING.—A print of some historical object or ornament to be copied on either an enlarged or a reduced scale.

(*d*) ELEMENTARY DESIGN OR SPACE FILLING.—A given space to be filled with a coloured design based on a print of some characteristic portion of a plant. Credit will be given for good lettering in any writing that appears on the sheet.

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* See footnote ‡ on p. 5.
† See footnote † on p. 5.
‡ Credit will be given for knowledge shown by candidates of the flora and fauna of their own country.

(*c*) PLANT DRAWING FROM MEMORY.*—Three plants will be set from the following list:—Bay, Christmas Rose, Cylamen, Honeysuckle, Ivy, Lily, Mistletoe, Narcissus, Pansy, Pink, Primrose, Violet. Candidates will be required to draw one of these three from memory in any medium.

Candidates must pass in three papers including either (*a*) or (*b*). Not more than four subjects in all may be taken.

(21) MUSIC:†

(*a*) AURAL TESTS.—Candidates will be required—

(i.) To reproduce examples of musical rhythm which will be played, the answers to be written on one note (the same pitch) throughout.

(ii.) To write from dictation a short melodic phrase, the key being given and the key-note sounded, and to add bar lines.

(iii.) To recognize, and give the numerical signification only of, diatonic intervals formed by any two notes of the scale sounded together. The key-note will be sounded.

(iv.) To recognize common chords and their inversions.

(v.) To write from memory in any key specified by the Examiners the melody of one of the following eight Folk Songs (in "English Folk Songs for Schools," Curwen, 24, Berners Street, London, W.1, voice part, one shilling); "The Carrion Crow"; "This Old Man"; "Sweet England"; "Lord Rendal"; "The Tailor and the Mouse"; "Just as the Tide was a-flowing"; "Hares on the Mountains"; "The Wraggle-Taggle Gipsies O!"

(*b*) Questions will be set on Notation; Scales, Clefs, Keys, Intervals, Time; the Marks and Terms generally employed in Music; Cadences.

(*c*) Candidates will be required to write a melody, the rhythm of which will be given; and exercises will be set, in not more than two voice parts, in which the lower or higher part will be given. The added part should be melodious and should form (with the given part) good two-part writing. Passing notes should be used freely.

Candidates must satisfy the Examiners both in the subject as a whole and separately in (*a*) and (*c*).

(22) NEEDLEWORK:

(1) ***Dealing with raw edges*** of calico and flannel: hemming; herring-boning; binding; applying false hems.

(2) ***Joining materials:*** top-sewing and felling (pillowcases and longcloth under-garments); running and felling (fine under-clothing); running and herring-boning (flannel shirts); running and binding (flannel outer garments); "French" seams (cotton outer garments).

(3) Tucking; gathering; buttonhole making; darning holes and thin places in stockings; patching holes in calico, print, and flannel garments (no seams to be involved, the work to be limited to the mending of holes in places where unpicking of the garments is not necessary).

(4) To make a chemise (showing gathers), a child's sleeping suit, and a child's frock (showing tucks). No candidate will be allowed to take the examination who has not completed these garments.

To know how to place the different parts of a pattern in the proper positions on the material; and to plan with a view to economy in cutting out.

Note.—Principals of girls' schools who propose to enter pupils for examination in sewing at the Junior Examination are required to send in to the Inspectress of Needlework in January of the preceding year (*i.e.*, two years beforehand) a list of the names of such pupils.

The Inspectress of Needlework will pay visits (without notice) periodically for the purpose of reporting on the progress of these pupils, and the teacher's record must be ready for inspection along with the work of each pupil. On November 30 all the finished garments must be in the hands of the Inspectress of Needlework.

Candidates must bring with them to the Practical Examination a ruler, red and blue pencils, cotton, needles, pins, a thimble, scissors, and a tape measure; and to the question paper a ruler and a pencil.

SENIOR SCHOOL CERTIFICATE EXAMINATION.

There is no age limit for candidates, but those born before December 15, 1913, will not be eligible for Honours or for marks of distinction.‡

In order to obtain a certificate candidates must at one and the same examination pass with credit in—

(1) English Language and Literature; and
At least one of the subjects in each of the following groups:—

GROUP I.

(2) Latin, (3) Greek, (4) Sinhalese, (5) Tamil, (6) Pali, (7) Sanskrit, (8) Arabic, (9) French, (10) German, (11) Dutch.

GROUP II.

(12) Mathematics, two papers: (*a*) Arithmetic and Algebra, (*b*) Geometry including a few easy questions on numerical Trigonometry), (13) Chemistry, (14) Physics, (15) Botany, (16) Rural Science, (17) Physiology and Hygiene, (18) Geography, (19) Housecraft.

GROUP III.

One of the following subjects if not already taken under Group II. above: (13) Chemistry, (14) Physics, (15) Botany, (16) Rural Science, (17) Physiology and Hygiene, (18) Geography, (19) Housecraft, (20) History, (21) Art, (22) Music, (23) Additional Mathematics.

GROUP IV.

One of the following subjects if not already taken under Groups I., II., and III., above: (2) Latin, (3) Greek, (4) Sinhalese, (5) Tamil, (6) Pali, (7) Sanskrit, (8) Arabic, (9) French, (10) German, (11) Dutch, (13) Chemistry, (14) Physics. (15) Botany, (16) Rural Science, (18) Geography, (19) Housecraft, (20) History, (21) Art, (22) Music, (23) Additional Mathematics.

N.B.—*Not more than six subjects may be offered in all. The sixth subject may be taken from any of the Groups I., II. III., or IV.*

Except in subject 1 no candidate may take two papers set at the same time in the Time Table.

No single paper may be taken in a subject comprising two or more papers and no combination of papers within a subject may be taken which does not satisfy the stated requirements for that subject.

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*Candidates may substitute the following list—Bongainvilia, Cyclamen, Honeysuckle, Lily, Magnolia, Oleander, Peach, Vine.

† The Aural Test in Music can be held in Colombo only.

‡ Marks of distinction will be shown on Certificates and in the detailed results but not on printed pass lists.

SYLLABUSES.

1. ENGLISH LANGUAGE AND LITERATURE : *

(*a*) *English Composition.*

Exercises, including the composition of an Essay, will be set with the object of testing the candidates' power to write clear and grammatical English.

(*b*) †*Shakespeare, A Midsummer Night's Dream or Richard II.*

(*c*) Milton, Lycidas, L'Allegro, Il Penseroso, Nativity Ode, ; *or* Victorian Narrative Verse (ed. C. Williams : Clarendon Press) omitting pp. 31–70, 108–112, 207–211, 283–302.

(*d*) Gibbon, Autobiography and the Age of the Antonines ; *or* Kinglake, Eothen.

The Autobiography is included in Everyman's Library (Dent) and the Age of the Antonines is the title of an edition by J. H. Fowler of Chapters 1–3 of the History of the Decline and the Fall of the Roman Empire (Macmillan).

(*e*) *General English Literature.*—A paper containing twelve questions, of which candidates should attempt only five, will be set as follows :—

(i.) Two questions on Shakespeare, one of which will be set more especially with reference to particular plays or characters.

(ii.) Questions which will give an opportunity to candidates to show first-hand knowledge of the most important works of some of the following :—

Poets : Spencer, Milton, Pope Gray, Blake, Wordsworth, Shelley, Keats, Tennyson, Browning, Matthew Arnold.

Prose Writers : Bacon, Bunyan, Addison, Lamb, Carlyle, Scott, Jane Austen, George Eliot, Dickens, Stevenson, Kipling.

(iii.) Questions which candidates will be able to answer from a general knowledge of (*a*) such poems as are included in well-known anthologies, (*b*) Elizabethan Drama, (*c*) Nineteenth Century Fiction.

(iv.) A question containing a number of short passages (some at least of which will be taken from the works of authors mentioned above) ; candidates answering this question will be required to identify any four of these passages.

Candidates must take paper (*a*) and any two of the papers (*b*) to (*e*) but not more. To satisfy the Examiners in English they must reach a certain standard in the three papers taken together, and must also reach a certain minimum standard in paper (*a*). To obtain the mark of distinction they must reach a higher standard in the subject as a whole.

Importance will be attached throughout the subject to clearness and correctness of style. A pass with credit in Composition will not be stated in the certificate.

2. LATIN :

Two papers will be set. Paper I. will include (1) questions on grammar ; (2) one or more easy unprepared passages for translation into English, a vocabulary of unfamiliar words being given ; (3) easy sentences for translation into Latin ; (4) a continuous passage for translation into Latin.

Paper II will contain (*a*) passages for translation from selected books, with questions, and (*b*) unprepared passages for translation into English.

Candidates will be required to attempt the unprepared translation in Paper II. and to offer **one** of the following selected books :—*Cicero*, in Catilinam I.–IV. ; Livy IX ; Virgil, Aeneid I. ; Juvenal, Satires III., X. (ed. Duff : Pi t Press).

Candidates must satisfy the Examiners separately in Paper I. and in the subject as a whole. To gain the mark of distinction they must reach a higher standard both in the subject as a whole and in Paper I., and also in Paper II. (*b*).

3. GREEK :

Two papers will be set. Paper I. will include (1) questions on grammar ; (2) one or more easy unprepared passages for translation into English, a vocabulary of unfamiliar words being given ; (3) easy sentences for translation into Greek.

Paper II. will contain (*a*) passages for translation from selected books, with questions, and (*b*) unprepared passages for translation into English.

Candidates will be required to attempt the unprepared translation in Paper II. and to offer **one** of the following selected books :—*Thucydides IV.*, 1–41, Demosthenes, Phillippics I., II. ; Homer, Odyssey XXI, XXII. ; Aeschylus, Prometheus Vinctus.

Candidates must satisfy the Examiners separately in Paper I. and in the subject as a whole. To gain the mark of distinction they must reach a higher standard both in the subject as a whole and in Paper I., and also in Paper II. (*b*).

4. SINHALESE : ‡

Two papers will be set. Paper I. will include questions on the set books.

Paper II. will include questions on grammar, unprepared translation from Sinhalese into English and translation into Sinhalese (composition).

The selected books‖ for 1931 are : (1) Thupawansa ; (2) Guttila Kāvya—Verses 225–337.

Candidates must reach a certain minimum in Paper II. taken as a whole, and a higher minimum in Papers I. and II. taken together. To gain the mark of distinction they must reach a higher standard in the subject as a whole, and must also reach a certain standard in translation and composition.

5. TAMIL : ‡

Two papers will be set. Paper I. will include questions on the set books.

Paper II. will include questions on grammar, unprepared translation from Tamil into English and translation into Tamil (composition).

The selected books‖ for 1931 are : POETRY : (1) Tirukkural, Chapters 69–78 ; (2) Villi Bharatham Krishnanthoothu-charukkam, stanzas 1–150. PROSE : Uthayanam Charithra Charukkam—Cantos 1 and 2 (V. Swaminatha Iyer, Thiyagaraja Vilasam, Madras, Re. 1. 4 Annas.

Candidates must reach a certain minimum in Paper II. taken as a whole, and a higher minimum in Papers I. and II. taken together. To gain the mark of distinction they must reach a higher standard in the subject as a whole, and must also reach a certain standard in translation and composition.

6. PALI :

Two papers will be set. Paper I. will include (1) questions on grammar ; (2) one or more easy unprepared passages for translation into English ; (3) easy sentences for translation into Pali ; (4) a continuous passage for translation into Pali, or as an alternative an essay of a simple character to be written in Pali.

Paper II. will contain (*a*) passages for translation from the selected book, with questions ; and (*b*) as alternatives for the selected book, unprepared passages for translation into English, with questions.

The selected book§ for 1931 is : Hatthavanagalla-Vihāravamsa.

Candidates must reach a certain standard in the subject as a whole, and must also satisfy the Examiners separately in Paper I. To gain the mark of distinction they must reach a higher standard both in the subject as a whole, and in Paper I.

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* Syllabus in English for 1932 has been revised—*Vide* Appendix V.

† The passages to be written out from memory will be taken from the following :—A Midsummer Night's Dream, I. i. 22–45, 226–251, II. i. 81–117, 153–172, 246–266 ; III. ii. 378–400 ; IV. i. 109–133 ; V. i. 2–22, 382–410.

Richard II. I. i. 47–68 ; I. iii. 119–143 ; II. i. 31–68 ; III. i. 1–29 ; III. ii. 144–177 ; III. iii. 143–169 ; V. i. 16–50.

‡ Answers to questions in Sinhalese and Tamil will be accepted either in English or in the Vernacular where either language would be equally suitable.

§ The selected books in Sinhalese and Pali for 1932 are : Sinhalese—(1) *Prose :* Nikaya Sangrahaya, (2) *verse :* Kusajataka Kavya, (verses 387–490). Pali—Datawansa, 1st Chapter.

‖ The selected books in Tamil for 1932 are : *Poetry :* (1) Tirukkural, Chapters 79–88, (2) Raguvansam Ayaneluchchi Padalam (Sothidapragasa Press, Kokkuvil, Jaffna. 75 cents). *Prose :* Virapatni by D. Suppiahpillai (Saiva Siththantha Publishing Works, 6, Coral Merchant street, Madras, Re. 1).

7. SANSKRIT:

Two papers will be set. Paper I. will include (1) questions on grammar; (2) one or more easy unprepared passages for translation into English; (3) easy sentences for translation into Sanskrit; (4) a continuous passage for translation into Sanskrit.

Paper II. will contain (*a*) passages for translation from the selected book, with questions; and (*b*) as alternative for the selected book, unprepared passages for translation into English, with questions.

The selected book* for 1931 is: Nalopakhyana (ed. with an English Vocabulary by J. Eggling, obtainable from Messrs. Motilal Banarsidass, Saidmitha Street, Lahore.)

Candidates must reach a certain standard in the subject as a whole, and must also satisfy the Examiners separately in Paper I. To gain the mark of distinction they must reach a higher standard both in the subject as a whole and in Paper I.

The use of the Nàgari character is required.

8. ARABIC:

One paper of three hours will be set. It will include (*a*) questions on idiom and syntax; (*b*) passages from the prescribed texts for translation and comment; (*c*) one or more unprepared passages for translation into English; (*d*) a passage of English for translation into the language.

Candidates must reach a certain standard in the subject as a whole. In order to gain the mark of distinction they must reach a higher standard in the subject as a whole and must also reach a certain standard in (*a*) and in (*c*).

Attention is called to the following note:

Arabic words in the answers to grammar questions must be fully vocalized.

N.B.—*All candidates are asked to take special pains to write clearly.*

The books prescribed for 1931 are:

Al-Fakhri, the first section (pp. 14 to 65 in the Cairo edition, 1317 A.H.; pp. 20 to 100 in Derenbourg's edition)
Mu'allaqahs of Zuhair, Imru'al-Qais and 'Amr bin Kulthum in the Seven Suspended Poems.

9. FRENCH:

Two papers will be set. Paper I. will consist of passages for translation into English. Paper II. will contain (*a*) one passage of English for translation into French; (*b*) an outline in French of a story for expansion.

Candidates must reach a certain standard in the subject as a whole. To gain the mark of distinction they must reach a higher standard in the subject as a whole, and must also reach a certain standard in each paper.

10. GERMAN.† 11. DUTCH:

The paper will consist of (1) passages for translation into English; (2) one passage of English for translation into the language; (3) an outline (given in the language) of a story for expansion.

Candidates must reach a certain standard in the subject as a whole. To gain the mark of distinction they must reach a higher standard in the subject as a whole, and must also reach a certain standard in (1) and in (2).

In each of the subjects, 9 and 10, marks gained in the Oral Examination‡ (see page 4) by candidates who pass in this test will be taken into account in borderline cases and at the credit and distinction standard. Failure in oral work will not prejudice the result in the written papers.

12. ELEMENTARY MATHEMATICS: §

There will be two papers in this subject. Paper I. will contain questions in Arithmetic and Algebra; and Paper II. questions in Geometry and Elementary Trigonometry. Candidates must satisfy the Examiners in the two papers taken together. A pass with credit in a single paper will not be stated in the certificate.

(*a*) { ARITHMETIC ‖ (the syllabus is the same as that for the Junior Examination *vide* page 3).
ALGEBRA.—The paper will include questions on the Syllabus for Algebra on page 5, both Parts I. and II. Squared paper will be provided.

(*b*) GEOMETRY with a few easy questions on Numerical Trigonometry.

Attention is called to the General Instructions and Schedules given in Appendix I.

Questions will be set on Schedules A (i.), A (ii.), A (iii.), and B (i.), B (ii.), B (iii.). The use of algebraical symbol; and (in the solution of riders) of trigonometrical ratios is permitted.

N.B.—Candidates must satisfy the Examiners in the two papers taken together. The mark of distinction in Elementary Mathematics is awarded on the combined result of the two papers included a subject 12.

13. CHEMISTRY¶ See APPENDIX II. (Theoretical Chemistry; Practical Chemistry).—Two papers will be set. Candidates must satisfy the Examiners in the subject as a whole, and also in the theoretical work.

14. PHYSICS¶ see APPENDIX III.: (Experimental Mechanics; Heat; Sound and Light; Electricity and Magnetism.)—Questions will be set on fundamental laws and the experiments that illustrate them.

Two papers on theory and a practical paper, each containing questions on all the four branches of the subject will be set.

Candidates must show a knowledge of more than one branch of the subject and satisfy the Examiners in the three papers taken together, reaching a certain standard in the theoretical work.

A candidate failing in both Chemistry and Physics by a narrow margin to reach the credit standard will be certified to have passed with credit in "Elementary Chemistry and Physics" as a single subject towards the certificate.

A candidate can satisfy the minimum requirement in Group II., or III., or IV as the case may be (*i.e.*, in one subject of any one of the Groups II, III., and IV.) on reaching both in Chemistry and in Physics a slightly lower standard than that required in either of the subjects separately.

15. BOTANY** see APPENDIX IV.—Two papers will be set, of which the first (Botany I.) will contain questions on Elementary Physics and Chemistry and a practical test in Botany.†† Candidates must satisfy the Examiners in both papers taken together.

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* The selected book in Sanskrit for 1932 is Hitopadesa (Sandi Kanda).

† Candidates are not required to use German characters, but credit will be given for the use of them, provided that the writing is well formed and legible.

‡ Senior candidates, however, who have already obtained a certificate upon which the written examination in any of the languages is recorded, may enter only at a subsequent examination for the oral examination in the same language, and, if successful, they will receive a supplementary certificate to that effect. The fee, as stated above, together with a share of the Examiner's expenses, must be paid. The date with index number when such students gained the certificates must be given on the oral entry forms, and the full name and address must in addition be given on the back of the form.

§ Candidates taking any of the mathematical papers other than Arithmetic will be provided in the examination room with mathematical tables. See note * on page 5; they should bring graduated rulers and protractors for all papers in which these are likely to be required. Except in practical examinations slide rules may not be used.

‖ Tables of four-figure Logarithms of Numbers will be printed on the back of the question paper in Arithmetic. Candidates are advised not to use them in attempting to solve any question unless they are satisfied that the answer can be obtained to a sufficient degree of accuracy.

¶ These subjects can be taken only at Centres at which a properly equipped laboratory is available for the purpose. Four-figure mathematical tables (see footnote † on page 5) will be provided in all papers in Chemistry and Physics; slide rules may be used in the practical examinations in both subjects.

** Credit will be given for knowledge shown by candidates of the flora and fauna of their own country.

†† Candidates will not be required to bring a flora into the Examination Room.

16. RURAL SCIENCE :

A.—*Environment :*

The village and its surroundings.
Winds and rainfall. Seasonal distribution of rainfall.
The sun's daily path. Important stars, planets, and constellations.
Village arts, crafts, and occupations. Marketing of agricultural produce. Co-operation,. Local public services

B.—*Animal Life :*

The general external appearance, abodes, and habits of the animals found in Ceylon.
E.g.—(*a*) Mammals such as elephant, monkey, leopard, bear, deer, rat, squirrel.
(*b*) Birds such as crow, paddy bird, myna, parrot, snipe.
(*c*) Other animals such as snake, frog, snails, leech, spider, butterfly, beetle, paddy bug.
The general structure and simple outline of the life history of the common insects. Insect pests of crops.
Termites and their effects on buildings.
Diseases conveyed by animals.
The domestic animals such as ox, buffalo, sheep, and goat.
The care of cattle.

C.—*Plant Life :*

Types of vegetation found in Ceylon. Cultivated food crops.
Types of soil. Functions of the different parts of a plant.
The cultivation of such vegetables as onion, chilli, brinjal, bean, tomato, spinach, bandakka, and curry stuffs.
Nature and extent of importation of food stuffs.
Germination and growth of the plant. The growth of crops.
Plant diseases.

17. PHYSIOLOGY AND HYGIENE :

Questions will be set on the following schedule, and will involve a knowledge of Elementary Physics and Chemistry :—

A.—Outline of the structure of the Human Body.
Nature of protoplasm and protein.
Physiology of the Human Body.
(1) The digestive system. Digestion and absorption, the structure and the care of the teeth.
(2) Excretion. The kidneys, the structure of the skin.
(3) The respiratory system.
(4) The vascular system and the heart. Healthy and unhealthy conditions of the blood.
(5) The outlines of the muscular and nervous systems.

B.—*Air.*—The composition of air ; methods of detecting the various gases in air ; impurities in air ; methods of detecting impurities in air ; trade processes which pollute air ; elements of hygrometry and of climatology.

Ventilation.—Diffusion of gases ; direction of air currents ; quantity of fresh air required ; natural and artificial ventilation ; good and bad systems ; methods of lighting rooms and houses, and their influence on ventilation ; purification of air, how effected.

Water.—Domestic supply ; quantity of water required for each person in the tropics ; sources of potable water; methods of collection and distribution of water ; sources of impurity ; methods of detecting impurities ; effects of insufficient or impure supply ; methods of purification of water ; filters ; hard and soft waters ; estimation of hardness ; action of hard and soft water on lead pipes ; simple methods of estimating the organic and inorganic substances dissolved in water ; water-borne diseases, with special reference to the tropics.

Foods.—Classification of foods ; the nature and importance of their chief constituents ; proteins, carbohydrates, fats, salts ; the chemistry of digestion and absorption ; excretion ; sound and unsound foods ; causes and effects of unsound food ; common adulterations and methods of detection preservatives ; microscopic examination of foods ; action of moulds and ferments on foods ; fermentation ; alcohol ; alcoholic liquors ; simple methods of estimating the chief constituents of foods ; effects of milling on rice and other grains ; accessory food factors (Vitamins).

Drainage.—Good and bad systems of domestic drainage in the tropics ; traps ; influence on health of bad systems ; removal of domestic refuse ; latrines and outline of methods of sewage disposal ; simple anti-malarial drainage.

Geological Features in relation to health; soils and subsoils ; ground-air and ground-water ; composition of ground-air ; water and organic matter in soil.

Personal Hygiene.—Rest and exercise ; necessity for regular exercise in the tropics ; respiration ; washing and bathing ; care of teeth ; soaps ; clothing material ; microscopic examination of fibres ; action of soaps, acids, and alkalis on fibres ; the abuse of opium, alcohol, and tobacco.

Infection, Disinfection, &c.—Common disinfectants and antiseptics ; their use and action ; simple facts concerning common infectious diseases in the tropics, particularly malaria, anchylostomiasis, and tuberculosis.

First Aid Methods in connection with burns and scalds, cuts, sprains and fractures, hæmorrhage, drowning, heatstrokes, bites, and stings.

18. GEOGRAPHY :

(*A reasonable choice of Questions will be given.*)

(i.) *General, Physical, and World Geography, including Map-work.*—The size, shape, and movements of the earth. Latitude and longitude. Longitude and time. Standard time. Distribution of land and water. Ocean currents, and a description (not the causes) of tidal phenomena. The general relief of the land. Coastlines and continental shelves. The distribution of atmospheric pressure. The wind systems. Annual and seasonal distribution of rainfall and temperature. Types of climate. The distribution of natural vegetation. The chief types of natural occupations. The major natural regions of the world.

Mapwork.—The elements of map-reading as illustrated in, *e.g.*, British Ordnance Maps
The preparation from furnished data, of statistical, climatic, contour, and other similar maps and diagrams.

(ii.) The outlines of the regional and general geography of the world. The methods of treatment will be those broadly indicated in the note to the Junior Syllabus. The same amount of detail will, however, not be required in all parts of the world.

Most attention should be given to the Monsoon Lands of Asia and the East Indies. The general Geography of Asia and Europe should be treated in less detail. The rest of the world in outline.

N.B.—It is realized that the whole of the work set out above for the Senior School Certificate Examination cannot be taught in one year. It is therefore strongly recommended that schools should so organize their geographical teaching so that the whole of the work leads up to the Syllabus given above.

19. HOUSECRAFT :

Two papers will be set. Paper I. will contain questions on Needlework and Paper II. questions on Housewifery and Hygiene.

A.—*Needlework*—

The nature, suitability, and hygienic value of materials.
Purchase of materials, approximate prices and quantities.
The use, care, and cleaning of the sewing machine. Simple experimental work to illustrate the cutting out and making of personal garments such as a girl's frock, a boys' tunic suit and a woman's blouse or jacket. Methods of decorating and repairing garments and household linen.
The paper will include practical tests. Candidates should bring their own sewing machines.

B.—*Housewifery and Hygiene*—

(*a*) The choice and care of furniture, bedding, household and cooking utensils.
The planning of household routine.
The planning and preparation of a simple meal.
Food preservation.
Disposal of refuse.
Household accounts.
(*b*) Laws of personal health.
Simple rules of diet for (*a*) a healthy person, (*b*) a sick person.
Avoidance of water pollution.
Value of light and air. Effect of environment, site aspect, sanitation, and water supply.
Care of the sick. Knowledge of and nursing of fevers, infectious diseases, use of antiseptics, &c.
Simple rules for the care and feeding of infants.
Common disinfectants and remedies.

20. HISTORY:

(*a*) HISTORY OF ENGLAND.—The paper will consist of four sections on the periods (i.) 1066 to 1485; (ii.) 1485 to 1688; (iii.) 1688 to 1815; (iv.) 1815 to 1914, respectively. Candidates may select questions from any one or two of the sections. Questions may be set involving some knowledge of the social and economic history and of the architecture of the period studied.

(*b*) HISTORY OF THE BRITISH EMPIRE.—The paper will consist of two sections on the periods (*a*) A.D. 1558–1763:—(*b*) 1763–1914. Candidates may select questions from either or both of these sections.

(*c*) Outlines of MODERN EUROPEAN HISTORY, 1815 A.D. to 1878 A.D., with questions on the most important events in the periods 1789 to 1814 and 1879 to 1914.

(*d*) ROMAN HISTORY, B.C. 266 to A.D 14.

(*e*) GREEK HISTORY, B.C. 510 to B.C. 323.

(*f*) INDIAN HISTORY (from 1000 A.D. and (in outline only) from Alexander's invasion to 1000 A.D.) Some questions on English History will be included.

Only one of the above six papers may be taken. A wide choice of questions will be given in all papers.

21. ART:

Success or failure will depend on a candidate's performance in the subject as a whole; no marks below a certain level in the individual papers will be counted towards the required total.

Candidates must take not less than three nor more than five papers in all; (*a*) or (*b*) must be among the papers taken.

(*a*) OBJECT DRAWING.—The group will consist of common objects and a drawing board, together with one or more of the following solids: the cube, square prism cylinder, cone, triangular prism, square pyramid, hexagonal prism, skeleton cube, and ring; it is to be drawn and shaded in any medium.

(*b*) MEMORY DRAWING.—(1) Drawing from memory an object which will be shown to the candidates for three minutes and then removed. (2) Drawing from memory a group of simple objects, which may include figures or plants. the drawing to be executed in any medium.

(*c*) DRAWING FROM THE FLAT.—A print of some historical object or ornament to be copied on either an enlarged or a reduced scale in any medium.

(*d*) DESIGN AND DECORATIVE COMPOSITION.—[(i.) or (ii.) or (iii.).]

Three questions will be set, but only one must be attempted.

(i.) Space-filling. A given space to be filled with a design based on a plant (a drawing of which will not be given) to be selected from the following list*: Convolvulus, Cowslip, Crab Apple, Daffodil, Dahlia (single), Geranium, Hawthorn Honeysuckle, Iris, Potato, Snapdragon, Vine.

(ii.) A design based on a given print of an historical style of ornament.

(iii.) A design in relation to one of the following crafts: Needlework, Script-writing and Lettering, Leatherwork, Pottery. Credit will be given for good lettering. If the purpose stated precludes the use of colour, a design in black and white will be accepted. A choice of two crafts will be given.

(*e*) PLANT DRAWING FROM MEMORY.—Three plants will be set from the list given under (*d*) (i.), of which only one is to be drawn. The drawing, which may be in any medium, must show characteristic details of structure from an artistic rather than a botanical point of view.

(*f*) FIGURE COMPOSITION.—In any medium to show one or more figures engaged in ordinary occupations. A choice of subjects will be given.

(*g*) PAINTING IN WATER-COLOURS.—On a sheet of paper, or on a Whatman board (size about 14 in. × 10 in.) supplied by the candidate, a study in water-colours will be required. The group to be copied will be arranged from objects in common use, with a suitable background and may include flowers and fruits.

(*h*) PERSPECTIVE DRAWING.—Geometrical and common objects in parallel and angular perspective, above and below the horizon. A knowledge of oblique planes will not be required.

(*i*) HISTORY OF ART AND ARCHITECTURE:

Candidates may either select questions from the two parts of the paper or confine their attention to one part.

PART I.—An elementary knowledge will be required of—

(*a*) The development of European painting from the 13th century to the end of the 16th century.
(*b*) The greatest masters of the Flemish and Dutch Schools.†

PART II.—An elementary knowledge will be required of—

(*c*) European Sculpture (Ancient, Medieval, and Modern).
(*d*) The development of Western Architecture, together with some acquaintance with the Ancient styles and the leading characteristics of Egyptian, Greek, Roman, Byzantine, and Gothic building.

Questions may be set on Renaissance Architecture, with special reference to work of this period in England.

At least seven questions will be set in each part of the paper, and candidates will be asked to answer not more than five questions in all.

22. MUSIC.‡—*Candidates will be required to reach a certain standard in the Aural Tests and also the two papers taken together.*

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* Candidates may substitute the following list: Convolvulus, Geranium, Honeysuckle, Orange, Orchid, Plum, Poinsettia, Vine.

† In 1932 the French and English Schools will be substituted and in 1933 the Italian and Spanish Schools.

‡ The Aural test in Music can be held in Colombo only.

PAPER I.—(*a*) AURAL TRAINING.—Candidates will be required: (i.) To reproduce examples of musical rhythm which will be played, the answers to be written on one note (the same pitch) throughout; (ii.) to write down from dictation a short melodic phrase, the key of which will be given and the key-note sounded, and to add bar-lines; (iii.) to recognize and name simple changes of key in passages played, the key being given and the key-note sounded; changes will be limited to modulations to the dominant, sub-dominant, and relative major or minor keys; (iv.) to recognize common chords and their inversions, and cadences. The names of the chords are to be written down. In cadences, the dominant, sub-dominant, and tonic notes will not necessarily be in the bass part; (v.) to write from memory, in any key specified by the Examiners, the melody of one of the following twelve National Songs (in "Songs of the British Islands," ed. Hadow; Curwen, 24, Berners Street, London, W.1, 5*s*., voice part, 1*s*. 6*d*.): "The Bailiff's daughter"; "Barbara Allen"; "Believe me, if all those endearing"; "Early one morning"; "Drink to me only"; "The Oak and the Ash"; "Heart of Oak"; "Blow, blow, thou winter wind"; "The May-pole"; "The Useful Plough"; "The Cavalier"; "A hunting we will go."

(*b*) STRUCTURE AND HARMONIZATION OF MELODIES.—Candidates will be required: (i.) *either* to discuss on the shape and balance of one or more melodies not already announced, *or* to compose a melody to a given stanza of verse; (ii.) to harmonize a given melody, indicating the harmony by means of either a sketch of a pianoforte accompaniment or a figured bass.

PAPER II.—(*c*) OUTLINE OF MUSICAL HISTORY.—A choice of simple questions will be given: Colles, *The Growth of Music* (published in three volumes by the Oxford University Press), is recommended.

(*d*) STUDY OF SPECIFIED WORKS. *

Detailed study of one of the following to be selected by the candidate (i.) a work for pianoforte solo; (ii.) a work for solo instrument with pianoforte; (iii.) a work for voices in not more than four parts. The questions will embody points of construction, context, historical circumstances and artistic influences. No knowledge of Harmony will be necessary beyond what is required for the Aural Tests.

The works prescribed for 1931 are as follows:—

(i.) Mozart, Pianoforte Sonata in D major No. 9 (Universal Edition No. 4,408).

(ii.) Beethoven, Violonello and Pianoforte Sonata in A major; Op. 69, (Universal Edition No. 4,793).

(iii.) Bach, Praise our God (Novello).

A candidate for distinction may also submit before the examination an original composition certified to be his or her unaided work; but the mark of distinction is awarded for work of sufficient merit on the two papers.

23. ADDITIONAL MATHEMATICS. Three papers will be set—

Paper I.—(*a*) Geometry: harder questions on the syllabus for subject 12 (*b*). on other properties of triangles and circles, and on the elementary geometry of the plane and sphere. Algebra: harder questions on the syllabus for subjects included in 12 (a), and easy questions on more advanced work, including permutations and combinations and the use of the binomial, exponential, and logarithmic expansions. (*b*) Trigonometry: to solution of triangles. Graphs of trigonometrical functions; addition theorems; problems in two and three dimensions.

Paper II.—(*a*) Elements of Analytical Geometry. Easy questions on the straight line, the circle, and the conic sections referred to principal rectangular axes. (*b*) Elements of Differential Calculus, including the differentiation of simple functions, turning values, tangents and normals; easy physical applications.

Paper III.—APPLIED MATHEMATICS, including the equilibrium of forces acting in one plane; the properties of the centre of gravity; friction; the lever, the common balance, the inclined plane, and the block-and-tackle; the composition and resolution of velocities and accelerations in one plane; rectilinear motion with uniform acceleration; mass, momentum, dynamical measure of force; work, energy, power; time of flight, greatest height and horizontal range of a projectile. In some simple questions graphical methods may be required.

To satisfy the Examiners in subject 23, candidates must take at least two Papers. In each of the Papers I. and II candidates may take either or both of the two sections (*a*), (*b*). No marks below a certain minimum for any paper will be counted.

A pass with credit in a single paper of this subject will be stated on the certificate if the candidate also passes with credit in subject 12. *The mark of distinction in additional Mathematics is awarded solely on subject 23.*

APPENDIX I: SYLLABUS AND SCHEDULES IN GEOMETRY.

GENERAL INSTRUCTIONS APPLICABLE TO THE JUNIOR AND SENIOR EXAMINATIONS.

The papers in Geometry will contain questions on Practical and on Theoretical Geometry. Every candidate will be expected to answer questions in both branches of the subject.

The questions on Practical Geometry will be set on the constructions contained in the annexed Schedule A, together with easy extensions of them. In cases where the validity of a construction is not obvious, the reasoning by which it is justified may be required. Every candidate must provide himself with a ruler graduated in inches and tenths of an inch, and in centimetres and millimetres, a set square, a protractor, compasses, and a fairly hard pencil. All figures must be drawn accurately and distinctly. Questions may be set in which the use of the set square or of the protractor is forbidden.

The questions on Theoretical Geometry will consist of theorems contained in the annexed Schedule B together with questions upon these theorems, easy deductions from them, and arithmetical illustrations. Any proof of a proposition will be accepted which appears to the Examiners to form part of a systematic treatment of the subject; the order in which the theorems are stated in Schedule B is not imposed as a sequence of their treatment. In the proof of theorems and deductions from them, the use of hypothetical constructions will be permitted.

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* Copies with numbered bars will be provided in the Examination Room for the use of candidates.

Schedule A. (Practical.)

A (i.).

Bisection of angles and of straight lines.
Construction of perpendiculars to straight lines.
Construction of an angle equal to a given angle.
Construction of angles of 60°, 45°, and 30°
Construction of parallels to a given straight line.
Simple cases of the construction from sufficient data of triangles and quadrilaterals.
Division of straight lines into a given number of equal parts or into parts in any given proportions.

A (ii.).

Construction of a triangle equal in area to a given polygon.
Construction of tangents to a circle and of common tangents to two circles.
Construction of circumscribed, inscribed, and escribed circles of a triangle.

A (iii.).

Simple cases of the construction of circles from sufficient data.
Construction of a square equal in area to a given polygon.
Construction of a fourth proportional to three given straight lines and a mean proportional to two given straight lines.
Construction of regular figures of 3, 4, 6, or 8 sides in or about a given circle.

Schedule B. (Theoretical.)

B (i.).

Angles at a Point.

*If a straight line stands on another straight line, the sum of the two angles so formed is equal to two right angles and *the converse.

*If two straight lines intersect, the vertically opposite angles are equal.

Parallel Straight Lines.

*When a straight line cuts two other straight lines, if (i.) a pair of alternate angles are equal, or (ii.) a pair of corresponding angles are equal, or (iii.) a pair of interior angles on the same side of the cutting line are together equal to two right angles, then the two straight lines are parallel ; and *the converse.

Straight lines which are parallel to the same straight line are parallel to one another.

Triangles and Rectilinear Figures.

The sum of the angles of a triangle is equal to two right angles.

In a polygon of n sides, the sum of the interior angles is equal to $2n$—4 right angles.

If the sides of a convex polygon are produced in order, the sum of the angles so formed is equal to four right angles.

*If two triangles have two sides of the one equal to two sides of the other, each to each, and also the angles contained by those sides equal, the triangles are congruent.

*If two triangles have two angles of the one equal to two angles of the other, each to each, and also one side of the one equal to the corresponding side of the other, the triangles are congruent.

If two sides of a triangle are equal, the angles opposite to these sides are equal ; and the converse.

*If two triangles have the three sides of the one equal to the three sides of the other, each to each, the triangles are congruent.

If two right-angled triangles have their hypotenuses equal, and one side of the one equal to one side of the other, the triangles are congruent.

If two sides of a triangle are unequal, the greater side has the greater angle opposite to it ; and the converse.

Of all the straight lines that can be drawn to a given straight line from a given point outside it, the perpendicular is the shortest.

The opposite sides and angles of a parallelogram are equal, each diagonal bisects the parallelogram, and the diagonals bisect each other.

If a pair of opposite sides of a quadrilateral are equal and parallel, it is a parallelogram.

The straight line drawn through the middle point of one side of a triangle parallel to another side bisects the third side.

The straight line joining the middle points of two sides of a triangle is parallel to the third side, and equal to one-half of it.

If there are three or more parallel straight lines, and the intercepts made by them on any straight line that cuts them are equal, then the corresponding intercepts on any other straight line that cuts them are also equal.

B (ii.).

Areas.

Parallelograms on the same base and of the same altitude are equal in area.

Corollary.—The area of a parallelogram is equal to the area of a rectangle on the same base and of the same altitude.

Parallelograms on equal bases and of the same altitude are equal in area.

Triangles on the same or equal bases and of the same altitude are equal in area.

Equal triangles on the same or equal bases are of the same altitude.

In a right-angled triangle, the square described on the hypotenuse is equal to the sum of the squares described on the sides containing the right angle ; and the converse.

Loci.

The locus of a point which is equidistant from two fixed points is the perpendicular bisector of the straight line joining the two fixed points.

The locus of a point which is equidistant from two intersecting straight lines consists of the pair of straight lines which bisect the angles between the two given lines.

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* Proofs of these theorems will not be required.

The Circle.

A straight line drawn from the centre of a circle to bisect a chord which is not a diameter, is at right angles to the chord; conversely, the perpendicular to a chord from the centre bisects the chord.

There is one circle, and one only, which passes through three given points not in a straight line.

Equal chords of a circle are equidistant from the centre; and the converse.

The tangent at any point of a circle and the radius through the point are perpendicular to each other.

If two circles touch, the point of contact lies on the straight line through the centres.

The angle which an arc of a circle subtends at the centre is double that which it subtends at any point on the remaining part of the circumference.

Angles in the same segment of a circle are equal; and, if the line joining two points subtends equal angles at two other points on the same side of it, the four points lie on a circle.

The angle in a semicircle is a right angle; the angle in a segment greater than a semicircle is less than a right angle and the angle in a segment less than a semicircle is greater than a right angle.

The circle described on the hypotenuse of a right-angled triangle as diameter passes through the opposite vertex.

The opposite angles of any quadrilateral inscribed in a circle are supplementary; and the converse.

B (iii.).

Areas.

Illustrations and explanations of the geometrical theorems corresponding to the following algebraical identities:—

$$k(a + b + c + \ldots) = ka + kb + kc + \ldots,$$
$$(a + b)^2 = a^2 + 2ab + b^2,$$
$$(a - b)^2 = a^2 - 2ab + b^2,$$
$$a^2 - b^2 = (a + b)(a - b).$$

The square on a side of a triangle is greater or less than the sum of the squares on the other two sides, according as the angle contained by those sides is obtuse or acute. The difference is twice the rectangle contained by one of the two sides and the projection on it of the other.

In any triangle, the sum of the squares on any two sides is equal to twice the square on half the third side together with twice the square on the median which bisects the third side.

The Circle.

In equal circles (or, in the same circle) *(i.) if two arcs subtend equal angles at the centres, they are equal; *(ii.) conversely, if two arcs are equal, they subtend equal angles at the centre.

In equal circles (or, in the same circle) *(i.) if two chords are equal, they cut off equal arcs; *(ii.) conversely, if two arcs are equal, the chords of the arcs are equal.

If a straight line touch a circle, and from the point of contact a chord be drawn, the angles which this chord makes with the tangent are equal to the angles in the alternate segments.

If two chords of a circle intersect either inside or outside the circle, the rectangle contained by the parts of the one equal to the rectangle contained by the parts of the other.

Proportion: Similar Triangles.

(Proofs which are only applicable to commensurable magnitudes will be accepted.)

If a straight line is drawn parallel to one side of a triangle, the other two sides are divided proportionally; and the converse.

If two triangles are equiangular, their corresponding sides are proportional; and the converse.

If two triangles have one angle of the one equal to one angle of the other and the sides about these equal angles proportional, the triangles are similar.

If a perpendicular is drawn from the right angle of a right-angled triangle to the hypotenuse, the triangles on each side of the perpendicular are similar to the whole triangle and to one another.

The internal bisector of an angle of a triangle divides the opposite side internally in the ratio of the sides containing the angle, and likewise the external bisector externally.

The ratio of the areas of similar triangles is equal to the ratio of the squares on corresponding sides.

APPENDIX II: CHEMISTRY SYLLABUS FOR JUNIORS.†

Questions will be set requiring an elementary knowledge of the following subjects:—

The distinction between elements, compounds, and mixtures. Equivalent weights. The meaning of chemical equations. The law of definite proportions. The laws of Boyle and Charles. Crystallisation and distillation, precipitation and filtration, and the use of these processes in the preparation of pure substances.

The air, its chief constituents; the effects of plants and animals on the air. Combustion. Oxidation and reduction.

Water, its evaporation and distillation; spring water, river water, sea water, hard water, soft water, rain water. The composition of water by volume.

The preparation and properties of hydrogen, oxygen, nitrogen, ammonia, nitrous oxide, nitrogen peroxide, nitric acid; chlorine, hydrochloric acid; carbon, carbon monoxide, carbon dioxide; sulphur, hydrogen sulphide, sulphur dioxide, sulphur trioxide, sulphuric acid.

The properties of sodium hydroxide, sodium chloride, sodium carbonate; calcium oxide, calcium hydroxide, calcium carbonate; lead, lead oxide, lead dioxide, red lead.

The characteristic properties of acids, alkalis, bases, and salts as illustrated by the substances mentioned above.

NOTE.—Candidates will be expected to perform simple calculations concerning the weights and gas volumes of reacting substances, but a knowledge of the atomic and molecular theories will only be required in so far as these theories are needed for the comprehension of chemical symbols, formulæ, and equations.

Practical Examination.

Candidates may be asked to observe the effect of heat and of reagents on substances supplied to them, to recognize the substances referred to in the above schedule, and to identify the solid or gaseous products of a reaction, so far as these products are amongst the substances mentioned in the above schedule. They may be asked to perform simple experiments illustrating the preparation, purification, and properties of these substances. They may also be asked to perform quantitative experiments such as the estimation of the loss or gain in weight of a substance on being heated in air, or the determination of the volume of a gas given off when a carbonate or a given weight of a metal is treated with an acid. Acidimetry and alkalimetry as involved in the use of standard solutions of sulphuric acid, nitric acid, sodium hydroxide, sodium carbonate. [*Alternative questions will be set.*]

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* Proofs of these theorems will not be required.

† This subject can be taken at those centres only at which a suitable laboratory and apparatus can be provided.

CHEMISTRY* SYLLABUS FOR SENIORS.

N.B.—This schedule is to be taken to include the schedule for the Junior Certificate Examination.

The distinction between elements, compounds, and mixtures. The laws of Boyle, Charles, and Gay-Lussac, and Avogadro's hypothesis. Atoms and molecules. Laws of chemical combination. Simple cases of reversible reactions. The meaning of chemical equations. Equivalent and atomic weights and the methods for their determination in simple cases only. Solution, crystallization, distillation, precipitation, and filtration, and the use of these processes in the preparation of pure substances.

The study of air and water. Oxidation and reduction. Combustion.

The chemistry of the following elements and of their chief compounds: hydrogen; oxygen; chlorine (and its relation to bromine and iodine); sulphur; nitrogen; carbon (including methane, ethylene, acetylene); sodium; calcium; iron; copper, zinc, lead. (The details of the metallurgical processes will not be required.) The characteristic properties of acids, alkalis, bases, and salts as illustrated by the above substances.

Practical Examination.

The study of the qualitative and quantitative results of the effect of heat and of the common reagents on substances supplied. Qualitative analysis of simple salts of the commoner metals and acids (excluding phosphates).

Simple problems in volumetric analysis involving the use of standard solutions of acids, alkalis, silver nitrate, potassium permanganate.

Alternative questions will be set, so that candidates will not necessarily be required to take the qualitative analysis.

APPENDIX III: PHYSICS* SYLLABUS FOR JUNIORS.

The questions will be principally such as will test the candidates' knowledge of the subject as gained from a course of experimental instruction. Candidates will be expected to be able to apply the principles outlined in the following schedules to simple everyday phenomena.

EXPERIMENTAL MECHANICS:

(*This paper may not be taken with section 13 (d) Elementary Applied Mathematics.*)

Simple methods of measurement of length, mass, and time.
Determination of density and specific gravity.
Velocity, acceleration; Construction and use of space-time and velocity-time curves.
Force. Motion under the action of a single force.
Weight, motion of bodies falling from rest.
Composition of forces in one plane. Conditions for equilibrium of three forces.
Centre of gravity, equilibrium.
Moments of forces.
Simple machines, velocity ratio of a machine, the principle of work.
Energy, conservation of energy, power.
Experiments on friction.
The principle of Archimedes.
Pressure in liquids at rest, floating bodies.
Pressure of gases, Boyle's Law.
Barometer, atmospheric pressure. Pumps.

HEAT:

Construction and use of common thermometers, including maximum, minimum, and clinical thermometers. Heat and the method of mixtures for comparing quantities of heat, specific heats of solids and liquids, units of heat, heat capacity, calorific value of fuels. Determination of freezing points and boiling points; latent heats of water and steam; influence of pressure on the boiling point of water; regelation. Measurement of the coefficients of linear expansion of solids and of apparent expansion of liquids. Relation between the temperature, volume, and pressure of a gas, absolute temperature. Conduction, convection, and radiation. Heat considered as a form of energy.

SOUND AND LIGHT:

The direct determination of the velocity of sound in air, the reflexion of sound, echoes. Comparison of longitudinal and transverse wave motion, the relation between wavelength, velocity of propagation, and frequency. The siren, tuning-fork, monochord, and closed organ pipe. Resonance. The physical significance of the terms pitch and interval.

The formation of shadows, the pin-hole camera, reflexion at plane and concave spherical surfaces, real and virtua images, images formed by two plane mirrors at an angle; refraction at a plane surface, index of refraction, total reflexion triangular prisms (not including the formula for minimum deviation). The formation of images by a thin convergent lens, focal length, graphical methods for determining the position and size of the image formed by a mirror or lens (the use of the formulae will be permitted, but will not be demanded). The eye (not including defects of vision), the photographic camera, the simple microscope. Elementary treatment of colour, and dispersion.

N.B.—Candidates should bring drawing instruments and a scale graduated in centimeters and millimetres.

ELECTRICITY AND MAGNETISM:

Simple phenomena of magnetism; magnetic induction; comparison of the magnetic properties of iron and steel. Lines of force; use of iron filings and a compass needle for plotting lines of force; neutral points. Parallelogram of forces; use of the deflection magnetometer for the comparison of magnetic fields.

Simple phenomena of electrostatics; electrostatic induction. The electroscope and electrophorus. Potential.

Daniell and Leclanché cells. The magnetic field accompanying an electric current; comparison of electric currents by means of the tangent galvanometer; the electro magnet. Electrolysis illustrated by the copper voltameter and the water voltameter. The ampère, the volt; Ohm's law; the ohm. The E.M.F. and internal resistance of a cell. The production of heat by an electric current. [The Wheatstone bridge and potentiometer are not included.]

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*PHYSICS SYLLABUS FOR SENIORS.

N.B.—This schedule is to be taken to include the schedule for the Junior Certificate Examination.

The questions will be principally such as will test the candidates' knowledge of the subject as gained from a course of experimental instruction.

EXPERIMENTAL MECHANICS:

Methods of measurement, the use of graphical methods.
Velocity, acceleration; the resolution and composition of velocities and accelerations.
Mass, momentum, the ballistic balance. Force. Motion under the action of a single force.
Weight, motion of falling bodies.
Work, energy, conservation of energy, power.
Composition and resolution of forces in one plane. Conditions for equilibrium of three forces.
Centre of gravity, equilibrium.

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* This subject can be taken at those centres only at which a properly equipped laboratory is available.

Moments of forces ; couples.
Simple machines, velocity ratio of a machine, the principle of work.
Experiments on friction.
Distinction between solids, liquids, gases.
Pressure in liquids ; floating bodies.
Determination of density and specific gravity.
Pumps, hydraulic press.
Pressure of gases, Boyle's law, atmospheric pressure.
Barometer, air pumps.

HEAT :

Temperature and its measurement.
Calorimetry, specific heat of solids and liquids, latent heat.
Expansion of solids and liquids.
Relations between the volume, pressure, and temperature of a gas.
Change of state ; fusion, determination of melting and boiling points, evaporation, ebullition, vapour pressure, dew-point, hygrometry.
Transmission of heat by conduction and convection.
Radiation, its propagation, its relation to light.
Mechanical equivalent of heat, its determination.

SOUND AND LIGHT :

The propagation, reflexion, and refraction of light ; photometry.
Measurement of index of refraction of solids and liquids.
Total reflexion.
Graphic methods of determining the position and size of an image formed by reflexion or refraction.
Measurement of focal lengths of mirrors and lenses.
Deviation and dispersion produced by a prism. The spectrum. The Colour. The colour of natural objects,
Optical properties of the eye ; long-sight and short-sight, their correction.
Combination of two lenses to form a telescope or a microscope.
Production, propagation, and reflexion of sound.
Relation between the sound produced and the character of the vibrations.
Determination of pitch of tuning-forks, beats, experiments on the vibrations of strings and columns of air ; resonance.
Experimental determination of velocity of sound in gases.

N.B.—Candidates should bring drawing instruments and a scale graduated in centimetres and millimetres

ELECTRICITY AND MAGNETISM :

Simple phenomena of magnetism. The earth as a magnet.
Experimental verification of laws of magnetic force.
Mapping of magnetic fields, comparison of moments of magnets, comparison of strength of field
Simple phenomena of electrostatics, electrostatic induction.
Meaning of potential, distribution of charge, capacity.
Production of electric currents, primary cells.
Magnetic effects of a current, galvanometers.
Chemical effect of a current, laws of electrolysis, secondary cells.
Ohm's Law. Resistance.
Comparisons of currents, electromotive forces, resistances.
Practical units of current, electromotive force, resistance ; specific resistance
Heating effect of a current, Joule's law.
Electromagnetic induction.
Experiments to illustrate its use in the dynamo and motor.

Practical Examination in Physics.

The examinatio will consist of simple experiments, chiefly of a quantitative character. Its scope will be as follows:—

Experimental Mechanics.—The measurement of lengths, areas and volumes ; the spherometer ; experiments on moving bodies ; the ballistic balance ; the simple pendulum ; experiments involving the graphical treatment of systems of forces ; the use of the balance ; machines ; the determination of coefficients of friction ; centre of gravity ; experiments involving the principle of Archimedes ; the determination of specific gravity and density ; the measurement of fluid pressure ; the barometer.

Heat.—The use of thermometers and the testing of their fixed points ; the determination of melting points and boiling points ; the determination of specific heat, capacity for heat and latent heat ; hygrometers ; the measurement of vapour pressure ; the expansion of solids, liquids, and gases ; gas thermometers ; the rate of cooling of hot bodies.

Sound and Light.—Experiments on the reflexion of light at plane and spherical surfaces ; the measurement of refractive index ; thin lenses ; use of pins for method of parallax ; prisms ; the construction of the telescope, compound microscope and spectroscope. The velocity of sound in gases ; the notes emitted by stretched strings and wires.

Electricity and Magnetism.—The measurement of magnetic pole strengths and magnetic moments ; magnetic fields, and the measurement of field strength ; the use of the condenser ; galvanometers ; measurement of current strength and resistance ; the comparison of electromotive forces.

APPENDIX IV: BOTANY SYLLABUS.

INTRODUCTORY OBSERVATIONS :

The study of Botany should be based upon careful observation of living plants.

It is essential that the teacher should constantly keep in mind the importance of naked-eye work and of experiments performed as far as possible by the students themselves on living plants. For the study of certain aspects of plant life demonstrations conducted by the teacher will be found of great value. A simple lens and dissecting instruments will be found sufficient to enable the student to recognize such anatomical features as are essential for the appreciation of many physiological processes.

The schedule prescribes the use of the microscope for Senior students, but it is not intended to discourage the use of the microscope for *demonstration* purposes in the case of Junior students when it is difficult for them to form an adequate conception of structural features (*e.g.*, stomata, chloroplasts, &c.) which are too small to be seen satisfactorily under a simple lens.

It is very important that students should be taught (*a*) to make, from specimens, drawings much larger in scale than the actual objects, and diagrammatic in treatment ; (*b*) to avoid irrelevance and diffuseness in their answers.

With a view to avoiding the danger, consequent on limitation of time, of attempting to hurry students through the longer courses of instruction, a choice of questions will be allowed in the Junior and Senior Examinations.

In the examinations on the Junior and Senior schedules specimens (not necessarily confined to the families mentioned in the schedules) will be provided for description, and special weight will be given to this part of the examination. Students should bring a pocket lens and a dissecting instrument.

JUNIOR.

I.—The Morphology and Functions of Herbaceous Plants :

The examination of a common herbaceous Dicotyledon to illustrate the structure and functions of the root and shoot systems ; the distribution of vascular and mechanical tissues ; the origin and position of new members on roots and shoots ; and a comparison of the growing points of stems and roots. The root and shoot systems should be treated also from a biological point of view, showing how each is adapted in its mode of growth and arrangement of parts to carry out its physiological functions in the medium in which it lives.

Students should take part in the performance of simple experiments illustrating the more important physiological functions of plants; respiration ; transpiration ; absorption ; nutrition ; etiolation, heliotropism, and geotropism, their biological importance.

Students should have an *elementary* knowledge of the chemical and physical properties of the atmosphere, soil, and water.

II.—Arborescent Plants :

Comparison of the mode of growth, habit, and bark-characters of a few common trees: the examination of twigs of some common trees, including (for deciduous trees) comparison of their leafy and leafless stages and relation of latter to dry season. Knowledge of annual history of common trees, including time of producing young foliage, colour and habit of young foliage, time of flowering, and of ripening fruit. Observation of cauliflory, of hanging roots (banyan tree), stilt roots, buttress roots, of the production of latex and useful fibre.

General characteristics of palms and bamboos contrasted with dicotyledonous trees.

III.—Comparative Morphology and Biology :

A comparison of a few selected plants to illustrate the principal forms of leaves and stems.

Examination of the distinctive characters and of the adaptations to different modes of life of the following series of biological types : grass, dicotyledonous herb, tree.

Adaptation to special habitats as illustrated by water plants and climbing plants.

Comparison of the different parts of plants in which food reserves are stored.

IV.—Flowers and Reproduction :

The student should not begin the study of flowers by learning the characteristics of various families. Flowers should, in the first place, be considered, like vegetative organs, from a biological point of view. Attention should be paid to features of biological interest in some common types of inflorescences, as well as to the functions and special morphology of the parts of the flower in relation to pollination and seed production. Emphasis should also be laid on the importance of dichogamy and other methods of insuring cross-pollination. Flowers of the following families* should be examined : Dilleniaceæ, Malvaceæ, Leguminosæ including Mimoseæ and Cæsalpineæ, Myrtaceæ, Rubiaceæ, Compositæ, Convolvulaceæ, Scrophulariaceæ, Amaryllidaceæ, Commelinaceæ

Different types of seeds and fruits should be examined with special reference to seed dispersal.

V.—Biological Types and Life Histories :

Knowledge of characteristics of the following biological types :—

Epiphytes.—Including Orchids, Ferns, Araceæ, Ficus, Rhipsalis, their various adaptations for their habitat.

Parasites and Semi-parasites, e.g., Cuscuta, Cassytha, Loranthaceæ.

Xerophytes, e.g., Euphorbia, Sansevieria, Casuarina, Oleander, Cactaceæ.

Insectivorous plants, e.g., Nepenthes, Drosera, Utricularia.

Hydrophytes, e.g., Nymphæa, Eichhornia, Myriophyllum, Trapa, Monochoria, Pistia.

The part played in the life of the plant by seeds, bulbs, tubers, and other structures adapted for food storage and for vegetative reproduction.

Students should themselves grow suitable seeds in order to study different types of germination.

It is desirable, when circumstances permit, that excursions into the country should be arranged to enable students to observe the plants of different classes of habitats.

SENIOR

The examination will include Elementary Physics and Chemistry as well as Botany. Two papers will be set, one of which will include a compulsory practical question and three questions on Elementary Physics and Chemistry contained in the following schedules. Candidates will be required to answer two, and only two of the Chemistry and Physics questions.

Elementary Physics and Chemistry :

Practical methods of measurement of lengths, and volumes. The use of squared paper. Weight, the use of the balance ; density. The differences between solids, liquids, and gases. The U-tube pressure gauge ; the barometer ; measurement of pressure of liquids and gases ; Boyle's law.

The thermometer and the measurement of temperatures. The calorie and the measurement of heat quantities. The main facts about expansion of solids, liquids, and gases, and change of state. Charles' law. Radiant Energy.

Distinction between elements, compounds, and mixtures. The law of definite proportions. The law of conservation of mass.

Distillation, solution, evaporation, filtration. The chemistry of air and of its constituents. Rusting and burning ; hydrogen and water ; carbon and carbon dioxide ; lime and chalk ; elementary knowledge of acids, bases, and salts. Sodium potassium, magnesium, nitrogen, phosphorus, and their simple compounds, especially in relation to plant life.

Botany :

I.—The Morphology and Biology of Flowering Plants.

The microscope should be used, at the discretion of the teacher, for the examination of organs, the function of which it is difficult to understand without some knowledge of their microscopic structure.

An examination of a Dicotyledon and Monocotyledon to illustrate the structure and functions of the root and shoot systems ; the distribution of vascular and mechanical tissues ; the origin and position of new members on roots and shoots; and a comparison of the growing points of stem and root. The root and shoot system should be treated also from a biological point of view, showing how each is adapted in its mode of growth and arrangement of parts to carry out its physiological functions in the medium in which it lives.

Simple comparative morphology of leaf and stem.

Examination of the distinctive characters and of the adaptations to different modes of life of the following series of biological types : grass, dicotyledonous herb, tree.

Adaptation to special habitats as illustrated by water plants and climbing plants and parasitic flowering plants.

Comparison of the different parts of plants in which food reserves are stored.

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* The above list is intended to suggest suitable material for use in the study of the morphology of the flower ; candidates are not expected to learn the characters of the families. If any of the orders named above cannot be obtained, teachers should use their discretion in substituting other orders, which should resemble as nearly as possible the orders for which they are substituted as regards the principal points which they illustrate.

II.—Plant Physiology :

The more important physiological processes of the plant, including the photosyntheses, respiration and transpiration.

Students should themselves perform simple experiments illustrating the nature of the soils and the more important physiological functions of the plant, including the simpler manifestations of irritability as exhibited by the movements of leaves, stems, and roots. Special prominence should be given to this experimental work.

An elementary study of plant nutrition, germination, and growth.

III.—Arborescent Plants :

A comparative study of common trees (Dicotyledons and Monocotyledons, including Palms, Pandanus, Bamboos, Dracæna) as regards habit, external morphology, forms of leaves, &c.

Secondary thickening ; its significance in relation to the increase in leaf-area and root development ; rings in wood, whether dependent on season or not, in what trees present and in what absent, what changes in nature of wood produce them ; medullary rays ; heartwood and sapwood.

IV.—Flowers and Reproduction :

The morphology and natural history of the flowers of the following families: Dilleniaceæ, Malvaceæ, Aurantiaceæ, Leguminosæ including Mimoseæ and Cæsalpineæ, Myrtaceæ, Cucurbitaceæ, Rubiaceæ, Compositæ, Convolvulaceæ, Acanthaceæ, Scrophulariaceæ, Amaryllidaceæ, Palmæ, Gramineæ.

The attention of the student should be drawn to the general uniformity of plan that prevails among flowers, and to the variations in the relations of parts characteristic of different families.

Students should be taught to construct floral diagrams, and to make drawings of longitudinal sections of flowers.

Cross-pollination, self-pollination, and their mechanisms.

Fertilization and the outlines of development of the seed and fruit from the ovules and ovary in some common plants.

The general morphology of fruits and seeds and the methods of dispersal.

V.—Biological Types and Life Histories :

More extended study of the characteristics of the biological types in the Junior Syllabus, with the addition of mangroves, sensitive plants, *e.g.*, Mimosa, &c.

The part played in the life of a plant by seeds, bulbs, tubers, and other structures adapted for food storage and for vegetative reproduction.

Students should themselves grow suitable seeds in order to study different types of germination.

The seedlings studied should always include cocos or some other common palm.

APPENDIX. V.

Cambridge Senior Examination, 1932.

SYLLABUS IN ENGLISH.

Candidates will be required to take paper (*a*) and either two of the papers (*b*), (*c*), (*d*), each of 1½ hours, or paper (*e*) of 2½ hours.

(*a*) *English Composition* (2 hours).

(*b*) Shakespeare : *Twelfth Night* or *King John*.

(*c*) Two of the following :—(i.) Johnson, *Papers from the Idler* (Cambridge Plain Texts) with S. C. Roberts, *The Story of Dr. Johnson* ; (ii.) Thackeray, *Esmond* ; (iii.) Byron, *Childe Harold*, Book III. ; (iv.) An *Anthology of Modern Verse* (Methuen's English Classics). Candidates must take (i.) or (ii.), and (iii.) or (iv.).

(*d*) *General English Literature* (five questions only to be attempted).

(*e*) *General English Literature* (eight questions to be attempted).

(*d*) and (*e*). Two Papers, containing respectively twelve and from fifteen to twenty questions, will be set as follows :

(i.) Two questions on Shakespeare, one of which will give opportunity to show knowledge of particular plays and characters. From four to six representative plays are suggested as a basis. Questions will not be set which involve a knowledge of any particular combination of plays.

(ii.) Questions which will give opportunity to show first-hand knowledge of some of the following authors and works :

(*It is expected that only the authors marked with an asterik will have been read by candidates taking General English Literature as a 1½ hours paper.*)

Poets :

Spenser : *Faerie Queene I., Epithalamion, Prothalamion, Shepheard's Calendar.*

* Milton : *L'Allegro, Il Penseroso, Nativity Ode*, a few Sonnets, *Lycidas.*

* Pope : *Rape of the Lock, Unfortunate Lady.*

* Gray : *Eton College, Elegy, Favourite Cat, Bard.*

* Wordsworth : *Tintern Abbey*, Lucy Poems, *Early Spring, Expostulation and Reply, The Tables Turned, Leech-gatherer, Solitary Reaper Daffodils, Celandine, She was a phantom . . . , Happy Warrior, Immortality Ode, Laodameia, Westminster Bridge, Milton, The World is too much with us . . . .*

* Coleridge : *Christabel, Ancient Mariner, Kubla Khan, Frost at Midnight.*

Shelley : *Stanzas in Dejection, West Wind, Cloud, Skylark, Arethusa, Night, Adonais*, Chorus from *Hellas*, " *Rarely . . . . .* " *Ozymandias, Euganean Hills.*

* Keats : Sonnets, Odes, *Eve of St. Agnes, Endymion.*

Byron : Some songs, *Sennacherib, Isles of Greece*, Selections from *Childe Harold, Mazeppa, Prisoner of Chillon, Sonnet on Chillon.*

*Tennyson : *Morte d'Arthur, Tithonus, Ulysses, Lady of Shalott, Sir Galahad, St. Agnes Eve*, and some patriotic poems and songs.

Browning : *Cavalier Lyrics* and the most suitable of the *Dramatic Lyrics* and *Dramatic Romances* (*e.g.*, pp. 1-9 of the selection in Dent's *King's Treasuries*).

Arnold : *Sohrab and Rustum* or *Balder Dead, Scholar Gipsy, Thyrsis, Forsaken Merman, Dover Beach.*

Prose Writers :

* Bacon : About ten representative Essays.

* Addison : *Coverley papers* and about ten representative Essays from the *Spectator.*

* Lamb : About ten representative Essays.

De Quincey : *English Mail Coach.*

* Jane Austen : *Pride and Prejudice, Emma, Northanger Abbey.*

* Dickens : *Pickwick Papers, David Copperfield, Tale of Two Cities.*

* Ruskin : *Sesame and Lilies, Seven Lamps of Architecture.*

Butler : *Erewhon.*

Morris : *News from Nowhere.*

(iii.) Questions which candidates will be able to answer from a general knowledge of—

(*a*) such poems as are included in well known anthologies, (*b*) Nineteenth Century Fiction, (*c*) Twentieth Century Fiction.

(iv.) A question containing a number of short passages (some at least of which will be taken from the works of the authors mentioned above) ; candidates answering this question will be required to identify any four or five of these passages.

N.B.—It is not anticipated or desired that teachers should attempt to "cover the ground" as set out in the above syllabus ; in practice, each teacher will choose a sub-syllabus from among the authors mentioned in (ii.) according to personal inclination. To provide for this, questions will be asked on all the authors specified in any one year, in addition to the questions contained in (i.), (iii.), and (iv.).

APPENDIX VI.: SPECIAL SENIOR CERTIFICATE FOR CEYLON.

The following conditions will apply to candidates who are preparing for the examination for the Special Senior Certificate for Ceylon in 1931 :—

To secure a Special Certificate they must—

(1) Pass with credit in English Language and Literature ;
(2) Pass with credit in one of the subjects in each of Groups II., III., and IV. ;
(3) Pass with credit in an additional subject chosen from Groups II., III., or IV.

N.B.—Not more than six subjects may be offered in all. The sixth subject may be taken from any of the Groups II., III., IV.

The examination for this Special Certificate will not be held after 1931.

Note.—The Examination for this Special Certificate is intended for candidates who do not wish to take any other language besides English. It should be further noted that this Special Certificate will not entitle the holder to any special exemptions.

APPENDIX VII.: EXEMPTIONS BY THE SENIOR SCHOOL CERTIFICATE EXAMINATION, 1931.

[*The Syndicate do not hold themselves responsible for any error caused by changes in requirements with which they have not been made acquainted. Students are referred to the published regulations of the respective Institutions.*]

A.—The University of Cambridge: Previous Examination.

I.—Exemption from the whole of the previous examination is granted to candidates who have gained a certificate in the Senior School Certificate Examination and passed with credit *either* in Latin or Greek, in a Subject of Schedule A (see below)i n English and in a fourth subject ; **or** in Latin or Greek, and in four other subjects, three of which four other subjects must be taken from Groups I., II., and III. below.

Group I.—English Language and Literature, History, Geography.
Group II.—Latin, Greek, French, German, Dutch, Sinhalese, Tamil, Pali, Sanskrit, Arabic.
Group III.—Elementary Mathematics Additional Mathematics, Chemistry, Physics, Botany, Geography (if not taken under Group I.).

II.—*Exemption from the whole of the previous examination, with the exception of the papers in Latin or Greek,* is granted to candidates who have gained a Senior School Certificate and passed with credit *either* in a language other than English or Latin or Greek, in a subject of Schedule A below, in English and in a fourth subject ; *or* in five subjects of which four must be taken from Groups I, II., and III. above.

III.—Exemption from parts of the previous examination is granted to candidates who have gained a certificate in the Senior School Certificate Examination as follows :—

(1) * From Part I., if the candidate has passed with credit in Latin or Greek and in one other language (other than English).
(2) From Part II., if the candidate has passed with credit in one of the subjects of Schedule A below.
(3) From Part III., if the candidate has passed with credit in English.

Schedule A—List of subjects referred to above : Elementary Mathematics, Additional Mathematics, Chemistry, Physics, Elementary Chemistry and Physics, Botany.

For the purpose of all the above exemptions a Senior School Certificate may be taken to include any Supplementary Senior School Certificate which the candidate may obtain.

Students desirous of obtaining exemption from any part of the previous examination may, if they already hold the Certificate of the Syndicate, enter for those subjects alone that are required for the purpose.

B.—The University of Oxford.

The holder of a Senior School Certificate who, either in the same or in separate Examinations, has passed with credit in two of the languages included in Group II., *vide* A I. above of which either Latin or Greek must be one, and in two other subjects included in Groups I., II., III., *vide* A I. above is entitled to exemption from Responsions.

C.—The University of London.

A Senior School Certificate entitles to exemption from the Matriculation Examination, if the student has at one and the same examination obtained a Certificate in the Examination as a whole and passed with credit in the following Subjects:—

(1) English ;
(2) Mathematics (subject 12) ; and
(3) Three of the following :—
  (*a*) Latin, (*b*) Greek.
  (*c*) French, (*d*) German.
  (*e*) History.†
  (*f*) Geography.
  (*g*) Two of the three following : Additional Mathematics I. (*b*) ; Additional Mathematics. II. (*a*) or (*b*) ; Additional Mathematics III.
  (*h*) Chemistry, (*i*) Physics, (*j*) Botany.
  ‡(*k*) Sinhalese *or* Tamil *or* Sanskrit, *or* Pali *or* Arabic—

provided in all cases either Latin, or Greek or Chemistry, or Physics, or Botany is included, and *provided further* that one language other than English is included.

In Elementary Mathematics, or Latin, or French (but in not more than one of those subjects) a standard somewhat lower than that of a pass with credit may be accepted for the purposes of Matriculation exemption, provided that (i.) the candidate has in the same examination passed with credit in five other recognized subjects in accordance with the normal requirements of the University of London, (ii.) a lower standard in Elementary Mathematics may not be accepted in the candidate has obtained a pass with credit in a more advanced mathematical subject, (iii.) a lower standard if either Latin or French may not be accepted if the candidate has obtained a pass with credit in any language other than English.

Candidates who desire to be informed if they have satisfied the conditions for exemption should apply to the General Secretary, Syndicate Buildings, Cambridge, stating the centre and index number and remitting a fee of 1 Shilling. Those applying during the Examination week will receive information on the publication of the Class Lists.

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* A native of Asia or Africa who is not of European descent—
  (*a*) Shall be entitled to the same exemption if he has attained the standard for exemption in Arabic or Sanskrit or Sinhalese or Tamil as if he had attained it in Latin or Greek.
  (*b*) May reckon English as one of the languages necessary for exemption from Part I. of the previous examination provided that he shall not use his qualification in English for the purpose of exemption both from Part I. and from Part II.

A student who has obtained exemption under (*a*) may not offer himself as a candidate for the Oriental Languages Tripos.

† English History *or* History of the British Empire *or* Modern European History *or* Roman History *or* Greek History

‡ Two of these languages will be accepted as two subjects for purposes of exemption, provided that one of them is Pali or Sanskrit or Arabic.

CAMBRIDGE SCHOOL CERTIFICATE EXAMINATIONS, 1931.—CEYLON CENTRES.

JUNIOR.

Except in English Literature, no Candidate may take two papers included in the same bracket.

Friday, December 4.	*Monday, December 7.*	*Tuesday, December 8*	*Wednesday, December 9.*
	8—9½ (*a*) Gospel 9½—11 (*b*) Joshua and Judges or Old Test. Hist. (*c*) Acts (*d*) Catechism, &c.	8—10 Arithmetic	8—11 (*b*) Shakespeare (*c*) Tennyson (*d* Stevenson (*e*) English Authors (*f*) English Grammar Two papers may be taken; those taking one only must take it at 8.0
	11—12½ English Composition	10—12 Experimental Science I. Needlework (Practical)	
8—10 Practical Chemistry		1—1½ Dictation	
	1½—3½ Sinhalese I. Tamil I.	1½—3 English History British Empire Roman History	1—3 French Dutch Sinhalese II. Tamil II.
1—3 Practical Experimental Science (Paper III.)			
	3½—5½ Electricity and Magnetism Hygiene with Elementary Physiology	3¼—4¾ Object Drawing*	3½—5½ Experimental Science II. Chemistry (Theoretical)

Thursday, December 10.	*Friday, December 11.*	*Saturday, December 12.*	*Monday, December 14.*	*Tuesday, December 15.*
8—10 Geometry	8—10½ Algebra	8—10 Latin II.	8—9½ Trigonometry	8—10 Greek II.
10¼—11½ Flat Drawing	10¾—11¾ Memory Drawing		9½—11½ Pali II.	10—12 Natural History
1—3 Botany	1—3 Latin I.	1—3 Pali I.	1—3 Applied Mathematics Experimental Mechanics	1—3¼ Elementary Design
3¼—4¾ Geography	3½—5½ Heat Music	3—5 Sound and Light	3¼—4¼ Plant Drawing	3½—5½ Greek I. German Spanish

* If at any centre the number of candidates entered for Object Drawing is larger than can be accommodated at one and the same time, the Supervisor will be at liberty to fix some other time for certain of the candidates. Due notice will be given by the Supervisor to the candidates concerned.

CAMBRIDGE SCHOOL CERTIFICATE EXAMINATIONS, 1931.—CEYLON CENTRES.

SENIOR.

Except in English Literature, no Candidate can take two papers included in the same bracket.

Saturday, December 5.	*Monday, December 7.*	*Tuesday, December 8.*	*Wednesday, December 9.*
	8—10 Pali I.	8—10 Sanskrit II.	
8—10 Practical Chemistry			8—11 (*b*) Shakespeare; (*c*) Milton or Narrative Verse; (*d*) Gibbon or Kinglake; (*e*) General English Literature
	8¼—11¼ Arabic	8¼—9¾ French I.	
	9½—12 Housecraft (Needlework)	10—11½ French II.	Two papers may be taken; those taking one only must take it at 8.
	10—12 Pali II.	10—12 Sinhalese I. / Tamil I.	
1—3 Practical Physics			
	1—3 English Composition	1—3 Sinhalese II. / Tamil II.	1—3½ Latin I.
		1—3½ Dutch / German	
	3¼—5¼ Botany II.	3¼—5¼ Theoretical Chemistry	3⅔—5⅔ Physics I. / Music II.

Thursday, December 10.	*Friday, December 11.*	*Saturday, December 12.*	*Monday, December 14.*	*Tuesday, December 15.*
8—10 English History / British Empire / European History / Roman History / Greek History / Indian History	8—10½ Elementary Mathematics Paper I.	8—10½ Latin II.	8—10 Figure Composition	8—10 Additional Mathematics III.
			8—10 Additional mathematics I.	
	10½—12 Flat Drawing	10½—12 Object Drawing*	10¼—11¾ Plant Drawing from Memory	8—11 Painting in Water Colours
10—12 Botany I.		1—2½ Housecraft (Housewifery, &c.)	1—3 Additional Mathematics II.	
1—3 Elementary Mathematics Paper II.	1—3½ Geography	1—3 Physics II.	1—4 Design and Decorative Composition	1—3½ Rural Science
		3—5 Music I. / Sanskrit I.		
3¼—4¾ Memory Drawing / Perspective Drawing	3½—5½ Physiology and Hygiene	3—5½ Greek II.	3—5½ Greek I.	3½—5½ History of Art and Architecture

* If at any centre the number of candidates entered for Object Drawing is larger than can be accommodated at one and the same time, the Supervisor will be at liberty to fix some other time for certain of the candidates. Due notice will be given by the Supervisor to the candidates concerned.

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