

Law (1921) Department.

(Education)

Crown SERIES.

G.O. No. 996

DATED 2-7-21

INDEXED

[Despatch Abstract.]

Code of Regulations for European schools---Revised curricula
and syllabuses for European schools--approved-Primary ~~scholarship~~
scholarship examination --abolished.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.
8.	35						
	10/11/22						

2

CURRENT FILE.

3

(EDUCATION) DEPARTMENT.

13 APR 1921

Received 191 . Registered 154 191.

C.N. 1313 B

Subject.

Submitting for approval of Government a printed copy
of the revised curricula and syllabuses for European Schools.

ENCLOS RES.	
No.	/
Spare copies	

R.C No. 6680/19

Station Madras, Dated the 12th April 1921. 191

From (Name) R.G. Grieve Esq., M.A.

(Designation) Ag. Director of Public Instruction

To The Secretary to the Government of Madras,

HOME (EDUCATION) Department.

Sir,

In para 5 of this office letter R.C.No. 6680/19 dated 16th January 1920 embodied in G.O No. 241, Home (Education) dated 23rd February 1920 it was stated that the Inspector of European Schools was engaged in the preparation of a form of certificate register and in the revision of the syllabuses and curricula for European schools. The question of curricula and syllabuses was carefully considered by European School Examinations Board in conjunction with the heads of certain European schools and the Inspector of European Schools submitted a revised curricula and syllabuses in certain subjects as finally revised which I have, in anticipation of the sanction of Government tentative modifications. I beg to enclose a printed copy of

the revised curricula and syllabuses referred to, and to request the approval of Government for the same with effect from the 1st January 1921.

2. The Syndicate of the Madras University has approved of the revised syllabuses and has recognised the European High School certificate under the revised curricula as equivalent to the Matriculation Examination for purposes of admission to affiliated colleges.
3. The European School Examinations Board recommended also the abolition of the Primary scholarship Examination as they were of opinion that children under 12 years of age were too young for a written examination of that kind. They considered that it would be preferable for the Inspector of European Schools to award the open Primary Scholarships in the same way as he now awards the special Primary Scholarships, viz; that he should take into consideration the financial circumstances of the Children in addition to their age and position in the IV Standard. I agree with the Board and request accordingly ^{the} sanction of Government for the abolition of the Primary scholarship examination.

I have the honour to be,

Sir,

Your most obedient servant,

R. S. M.
for Director of Public Instruction.

P.R.K. 8/4

Enclosure to C. No
131313. Es

CURRICULA SUBJECTS OF EXAMINATION AND
SYLLABUSES FOR EUROPEAN SCHOOLS.

Price, 3 annas.]

CURRICULA SUBJECTS OF EXAMINATION AND SYLLABUSES FOR EUROPEAN SCHOOLS.

The Director of Public Instruction, Madras, has approved tentatively of the following courses and syllabuses for the European High and Middle School and Scholarship Examinations. The second language must be a vernacular, unless special exemption has been granted. Further syllabuses will be issued from time to time. Existing syllabuses may be followed where new syllabuses have not been published. (The question of the retention of the Primary Scholarship Examination has not yet been settled.) The new scheme will come into force from the 1st January 1921.

HIGH SCHOOL.

Compulsory.

	Marks.	Percentage of marks required for a pass.
1. English (2 papers)	200	40
2. Arithmetic (including Mensuration) or Elementary Mathematics (as in the S.S.L.C. Scheme)	100	35
3. Second language	100	30

Optional.

GROUP (A).— 100 30

- | | |
|--|---|
| <ul style="list-style-type: none"> 1. English. 2. Second language. 3. Algebra. 4. Geometry. 5. Applied Mathematics. 6. Physics (2 papers). 7. Chemistry (2 papers). 8. Botany. | <ul style="list-style-type: none"> 9. Physiology. 10. English History. 11. Indian History. 12. Outlines of European History. 13. Geography. 14. Physiography. 15. Domestic Economy. 16. Mechanical Science. |
|--|---|

GROUP (B).— 75 30

- | | |
|---|---|
| <ul style="list-style-type: none"> 1. Trigonometry. 2. Calculus. 3. Analytical Geometry. 4. Drawing. 5. Hygiene. 6. Musical Theory. 7. Needlework. | <ul style="list-style-type: none"> 8. Book-keeping and Commercial Correspondence (present AA Curricula). 9. Shorthand. 10. Typewriting. 11. Practical Telegraphy. 12. Machine Drawing. |
|---|---|

N.B.—Not more than eight optional subjects may be brought up for the examination.

2 ⁴
MIDDLE SCHOOL.

Compulsory.

	Marks.	Percentage of marks required for a pass.
1. English (2 papers)	200	30
2. Arithmetic (including Mensuration)	100	30

Optional.

GROUP (A).—	...	...	...	...	100	30
1. Experimental Geometry (including theory).	7. Second Language.					
2. Algebra.	8. History (Outlines of English and Indian).					
3. Elementary Trigonometry.	9. Geography.					
4. Elementary Science.	10. Domestic Economy.					
5. Elementary Human Physiology.	11. Hygiene.					
6. Elementary Botany.						
GROUP (B).—	...	...	...	...	75	30
1. Book-keeping.	4. Free-hand Drawing.					
2. Shorthand.	5. Needlework.					
3. Typewriting.	6. Musical Theory.					

N.B.—Not more than six optional subjects may be brought up for the examination.

65
SYLLABUSES FOR EUROPEAN SCHOOL PUBLIC EXAMINATIONS.

Examination syllabuses:—The following syllabuses define the scope of the papers of the public examinations:—

MIDDLE SCHOOL AND SCHOLARSHIP EXAMINATIONS.

ENGLISH.

There will be two papers, one on the texts and the other on original Composition and Grammar.

The topics that might be touched on are indicated below:—

1. Texts.

For detailed study.

(i) A study in each case of the author's meaning and of his vocabulary. Reproduction with condensation. Easy exercises in visualization. The writing of annotations and free paraphrases. An easy exercise in recitation.

For Non-detailed study.

(ii) The subject-matter in its more important details and a reasonable acquaintance with persons and places. The use of such words and phrases as are found useful in an attempt at reproduction (as distinguished from a lexicographical study of words and phrases made for its own sake).

2. Grammar.

A study of the structure of the sentence in connexion with its punctuation, the observance of the usual concords, the avoidance of ambiguity and tautology, and the use of ellipsis. The analysis of sentences into clauses and the transformation—for effect—of clauses into phrases and *vice versa*. The order of phrases and clauses and the rule of proximity.

The grammatical functions of words and the necessary terminology. (Part I of Sonnenschein's *A New English Grammar* defines the scope of possible questions.) Comparison. The perfect tenses and the sequence of tenses. Indirect speech.

3. Composition.

In addition to the exercises in exposition indicated in 1. above the following exercises:—

The writing of simple business letters and descriptive letters to friends and relatives.

Simple dialogues.

Reproduction of an easy narrative read out.

An elementary study—from models—of descriptive composition.

HIGH SCHOOL AND SCHOLARSHIP EXAMINATION

ENGLISH.

There will be two papers—one on the texts and the other on original Composition and Grammar.

The topics that might be touched on are indicated below:—

I. Texts.

(i) For detailed study.

A close study in each case of the author's meaning and of his vocabulary. Visualization and characterisation. Reproduction with condensation. Paraphrasing and the writing of annotations, explanatory and critical. Poetical diction and scansion.

An exercise in recitation.

(ii) For Non-detailed study.

A knowledge of all important details and the use of the correct vocabulary in reproduction.

2. Grammar.

As for the Middle School Examination with a more complete knowledge of accidence and syntax in the detail represented by Part III of Sonnenschein's *A New English Grammar*.

3. Composition.

In addition to the exercises in exposition indicated in I above the following exercises:—

The writing of official letters.

The combination of narrative and descriptive elements in composition. The use of dialogue. The climax.

The use of figurative language.

The essay:—The study from models of the principle of selection. Argument.

Giving in a few well-constructed paragraphs the main idea of an unseen prose passage. Answering critical questions on an unseen poem.

A study—from models—of (i) the unity, length and balance of the sentence, (ii) the unity of the paragraph, and (iii) the correct use of connectives.

FRENCH.

MIDDLE SCHOOL.

Provision will be made for examination of two types of teaching.

I. Translation Method.

I. (a)—(I) Pupils will be expected to translate into English passages from an easy set book.

Alternative.

(2) As in the Cambridge Preliminary Examination, an easy unseen passage will be set for translation into English (unusual—words being translated in a vocabulary).

(b) An easy short passage, based on the matter and vocabulary of the set book, will be set for translation into French.

(c) Questions in English on the accidence.

Note.—The alternative in (a) will be of equal value in marking.

II. Direct Method.

(1) a suitable text-book (e.g., Smith's Elementary French book Blackie) will be set, on which easy exercises in free Composition, including reproduction and easy dialogues will be given.

(2) An easy story read aloud in French, for reproduction.

(3) Easy accidence; questions to be set in French.

HIGH SCHOOL.

I. (a) (i) A set book or books with passages for translation into English.

Alternative.

(ii) An unseen passage of suitable difficulty for translation into English.

Note.—The alternative in (a) will be of equal value in marking.

(b) Two short alternative passages based on the set books for translation into French.

(c) Questions in English on ordinary French accidence and syntax.

II. For those schools that work on more modern lines (a) one text will be taken instead of two, and (b) instead of (a) (i) and (c) above,—exercises in Composition and easy paraphrase in French will be set on the said book.

(c) Questions on grammar will be set in French.

LATIN.

Middle School Examination.

(Present Standard VI.) Two types of question papers.

(i) Similar to that set in the Cambridge Local Examinations, (Preliminary); the standard and, it is suggested, the text books being the same.

(ii) For those schools that adopt Reformed (Direct) Teaching of Latin. Either

(a) *Primus Annus* and *Decem Fabulae* (Clarendon Press)

or

(b) *Initium* (Cambridge Press).

No translation will be set, but questions in Latin on the subject matter of the books, will be asked, to be answered in Latin of the standard reached in these books. Thus easy *free Composition* instead of *translation* will be set.

Grammar questions will be asked in Latin. Besides mere simple accidence, questions of a type common in the Direct Method and of a standard suited to the progress made will be asked.

e.g., Verte sententiam in primam personam.

(Vide *Præceptor* Cap. X, p. 81. *Via Nova* Cap. V, p. 115.)

High School Examination.

The examination will be as at present, i.e., mainly translations and questions on grammar. The standard aimed at should be that of the Senior Cambridge.

For the benefit of those who may have practised writing Composition, a question or questions in Latin on a set book will be given, as alternative to one of the set books, the answers to be in

free Latin composition of an easy standard. (The standard may be raised in course of time.)

Books of method recommended for those who take up the Direct Method.

(i) *Lingua Latina* (Clarendon Press. Five books and a wall picture).

(ii) *Initium* (Cambridge University Press).

Via Nova (Cambridge Handbooks for Teachers; Cambridge University Press).

GEOMETRY.

To the present High School Course add—

Theorems.—A straight line drawn parallel to one side of a triangle cuts the other two sides or those sides produced, proportionally.

Conversely, if two sides of a triangle are cut proportionally the line joining the points of section is parallel to the third side.

If the vertical angle of a triangle is bisected internally or externally, the bisector divides the base internally or externally into segments which have the same ratio as the other sides of the triangle.

Conversely, if the base is divided internally or externally into segments proportional to the other sides of the triangle, the line joining the point of section to the vertex bisects the vertical angle internally or externally.

If two triangles are equiangular to one another, their corresponding sides are proportional.

If two triangles have their sides proportional when taken in order, the triangles are equiangular to one another, and those angles are equal which are opposite to corresponding sides.

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

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

Problems.

To find the fourth proportional to three given straight lines.

To find the third proportional to two given straight lines.

To divide a given straight line internally and externally in a given ratio.

To find the mean proportional between two given straight lines.

Theorems.

Similar polygons can be divided into the same number of similar triangles; and the lines joining corresponding vertices in each figure are proportional.

Any two similar rectilineal figures may be so placed that the lines joining corresponding vertices are concurrent.

In equal circles, angles, whether at the centres or circumferences, have the same ratio as the arcs on which they stand.

The areas of triangles of equal altitude are to one another as their bases.

If two triangles have one angle of the one equal to one angle of the other, their areas are proportional to the rectangles contained by the sides about the equal angles.

The areas of similar triangles are proportional to the squares on corresponding sides.

APPLIED MATHEMATICS.

Questions may be set on the composition and resolution of forces acting in one plane at a point, including graphical representation of the same; 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 gravity; mass, momentum, dynamical measure of force.

HIGH SCHOOL.

PHYSICS.

To consist of four sections—

(1) Heat, (2) Light, (3) Magnetism and Electricity, (4) Experimental Mechanics.

Candidates to pass in any two sections—duration of paper 2½ hours—Marks 100—Questions in all four sections to be printed in separate parts in one paper.

Practical test—one hour—two exercises—Marks 100.

CHEMISTRY.

Course as indicated by the syllabus for Madras European High Schools. Duration of paper 2 hours—Marks 100.

Practical test—one hour—Marks 100.

DETAILED SYLLABUS.

HIGH SCHOOL.

PHYSICS.

I. Heat.

(a) *Its effects*—

(1) Temperature and its measurement. The construction and use of thermometers—temperature and heat—quantity—Calorimetry—specific heat.

(2) Expansion—Co-efficients of expansion—Volume, pressure, and temperature of a gas—their relations.

(3) Change of state. Fusion—determination of melting and boiling points—latent heat of fusion. Evaporation, ebullition, latent heat of vaporisation, dew-point, vapour pressure, hygrometry.

(b) *Transference of heat*—

Conduction, convection, radiation.

Convection currents in atmosphere and ocean.

Circulation of water vapour in atmosphere.

Radiation—its propagation—its relation to light.

(c) Mechanical equivalent of heat—its determination.

Practical work.

The use of thermometers—the testing of their fixed points—Co-efficient of expansion—rate of cooling of hot bodies—melting points and boiling points—specific heat—latent heat—hygrometer—vapour pressure.

II. Light.

(1) *Rectilinear transmission*.—Rays—pencils—shadows—images—eclipses—photometry.

(2) *Reflection*.—Laws of reflection—formation of images by plane, concave or convex surface, or by two plane mirrors at an angle—law of distances—focal length of mirror.

(3) *Refraction*.—Laws of refraction—refraction through plate, prism, lens, law of distances—focal length of lens—total internal reflection.

(4) *Deviation and dispersion*.—Produced by prism—the spectrum colour of natural objects.

(5) The eye and optical instruments—long sight, short sight, their correction—visual angle—microscope—camera, etc.

Practical work.

Experiments on reflection at plane and spherical surfaces—measurement of refractive index—lenses—prisms—construction of telescope, microscope, spectroscope.

III. Magnetism and Electricity.

(a) *Magnetism*.—Magnetic properties of iron and steel—methods of magnetisation—magnetic induction—(the earth), the earth as a magnet—moments of magnets—comparison of field strength by vibrating magnet—mapping of magnetic fields.

(b) *Electrostatics*.—Simple phenomena—electrostatic induction—potential—distribution of charge—capacity—the electroscope—the electrophorus—the Leyden jar.

(c) *Electric Currents*.—(Cells—Voltaic—Grove—Daniell—Bunsen—Leclanche—Bichromate.)

Magnetic effect of currents in straight and coiled wires, the tangent Galvanometer—its constant. Heating effect of currents. Chemical effect—electrolysis—experiments to illustrate electromagnetic induction—Cells in series and parallel—units of current, electromotive force, resistance—comparison of currents, electromotive force, resistance.

Practical Work.

Measurement of magnetic pole strength and magnetic moments—mapping of magnetic fields—measurement of field strength—the use of electroscope, electrophorus, condenser, the tangent galvanometer—its constant measurement of current strength and resistance—Comparison of electromotive forces.

IV. Experimental Mechanics.

Methods of measurement, the use of graphical methods, velocity, acceleration, resolution and composition of velocities—and accelerations.

Mass, momentum. 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 of equilibrium of three forces.

Centre of gravity. Equilibrium.

Moments of forces. Couples.

Simple Mechanics, velocity ratio of a machine, principle of work.

Experiments on friction.

Distinction between solids, liquids and 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.

Practical.

The measurement of lengths, areas, volumes; the spherometer; experiments on moving bodies; the simple pendulum; experiments involving the graphical treatment of systems of forces; the use of the balance; machines; the determination of co-efficients of friction: Centre of gravity experiments involving the principle of Archimedes; the determination of specific gravity and density, measurement of fluid pressure; the barometer.

CHEMISTRY.

Course as indicated by the syllabus for Madras European High Schools.

Practical Work.

1. Observation of the effect of heat and of re-agents on substance supplied.

2. Recognition of the following substances:—

Hydrogen, oxygen, nitrogen, ammonia, nitric acid, chlorine, hydrochloric acid, carbon, carbon dioxide, sulphur, sulphur dioxide, sulphuric acid, sodium, sodium chloride, sodium bicarbonate, calcium oxide, calcium carbonate, lead, lead oxide, red lead, mercury, mercuric oxide, iron, ferric oxide, magnetic oxide of iron.

3. Identification of solid or gaseous products of a reaction so far as they are amongst the above mentioned substances.

4. Simple experiments to illustrate the preparation, purification and properties of the above mentioned substances.

5. Simple quantitative experiments.

6. Simple problems involving the use of standard solutions of acids, alkalis, potassium permanganate, and silver nitrate.

HIGH SCHOOL.

DOMESTIC ECONOMY.

I. Food.

Food values—diets.

Adulteration of food.

Beverages—their relative values.

The effects of alcohol on the body.

Cooking.—Baking—boiling—frying—rules for and methods of cooking simple dishes for breakfast, dinner and tea.

II. Laundry Work.

Washing and ironing silk, and white cotton garments, getting up of lace, velvet, ribbon, etc.

III. Housewifery.

The care of children.
Furnishing a house.
Arrangement of rooms—cost of furniture—estimates of expenditure for families. Care of store-room.
Thrift—savings.
Duties of servants—and duties of mistress.

IV. Home Nursing.

Choice of sick room—furniture—cleanliness, food for various diseases—making and applying of poultices—First Aid.

MECHANICAL SCIENCE.

Stress, strain, elasticity and friction.
Composition and equilibrium of forces.
Polygon of forces.
Laws of equilibrium, centre of gravity and Parallel of Forces.
Reciprocal figures. Funicular Polygon.
Accelerated Motion and Force.
Work. Energy. Impact. Simple Harmonic Motion and Laws of Motion.
Machines.
Work and Power.
Mechanics of Liquids. Hydraulic Machines.
Density. Flow of a liquid. Equilibrium of gases.
Mechanism.

DIFFERENTIAL CALCULUS.

Differentiation from first principles of x^n , product of two or more functions, quotient of two functions, function of a function, trigonometrical ratios, implicit functions. Tangent at a point of a curve. Maxima and minima values of a function (without introducing points of inflection); simple applications of the above to easy physical problems.

HIGH SCHOOL.

HYGIENE.

I. Physiology.

Circulatory System.
Respiratory "
Digestive "
Nervous "

II. Personal Hygiene.

Eating—drinking.
(1) *Habits.*—Smoking—sleep—washing—bathing.

(2) *Clothing.*—General remarks—selection of clothes—suitability for tropics—sources of clothing.

(3) *Exercise.*—The muscular system, the lymphatic system, the use and abuse of exercise, carriage and posture.

(4) *Parasites.*—Causes and treatment of skin diseases. Reasons for and methods of ridding the house and person of vermin.

III. Sanitation or Public Hygiene.

The house—soils—sites and buildings.
Disposal of refuse and sewage.
Care of servants' and animals' quarters.

Infectious and Contagious diseases.

Notification—Isolation—Segregation.
Disinfectants—Micro-organisms.
Immunity and protection.

Symptoms and treatment of the chief infectious and contagious diseases of India.

MIDDLE SCHOOL.

ARITHMETIC AND MENSURATION.

Numeration, simple and compound addition, subtraction, multiplication and division, reduction, vulgar and decimal fractions, mensuration of rectangular figures (plane and solid), simple proportion, percentages, simple interest and practice.

Candidates will be expected to know the following tables of weight and measures, viz., avoirdupois, linear measure, square measure, capacity (pints, quarts, gallons), metre and its multiples, and submultiples, Indian measure of capacity, viss, seer, maund, questions will be set in Indian money, and also in £. s. d.

MIDDLE SCHOOL.

GEOMETRY.

Practical—

Bisection of angles and of straight lines.
Construction of perpendicular to straight lines.
Construction of an angle equal to a given angle.
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.

Construction of a triangle equal in area to a given polygon.

Construction of tangents to a circle and common tangents to two circles.

Construction of circumscribed, inscribed and escribed circles of a triangle.

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.

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 these 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 one another.

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.

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.

Areas—

Parallelograms on the same or 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.

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 one another.

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 semi-circle is a right angle; the angle in a segment greater than a semi-circle is less than a right angle and the angle in a segment less than a semi-circle is greater than a right angle.

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

ALGEBRA.

Middle School.

Including simple equations, simple simultaneous equations with two unknown quadratic equations involving one unknown, with simple problems leading to such equations, and simple graphs; fractions, resolution into factors.

This paper might be divided into two parts; A for pass, and B for distinction; subjects marked being put in part B.

BOTANY.

*Middle School.**The Normal Plant and its parts—*

Root and shoot systems—nodes and internodes—a comparison of the formation of new parts on root and shoot.

The seed and its germination—

Conditions necessary for germination—structure and germination of such seeds as the Bean, Pea, Melon, Castor, Maize, Coconut. The children should be encouraged to grow those seeds themselves and to make out in each case the process of germination.

The Root—

Different types of root—response to stimuli—different regions of a root—functions of the root—the absorption of mineral substances by the root-hairs.

The Stem—

Different kinds of stems—structure and growth of bulbs, corms, rhizomes, tubers, etc.—functions of the stem—conduction of sap. Plants to illustrate should be grown.

The Leaf—

Arrangement of leaves on stem—different kinds of leaves—buds—naked, open and closed buds. The green leaf and the sun—light. Simple notions of the processes of carbon-assimilation, transpiration and respiration.

The children should be taught to notice the period at which common trees shed or renew their leaves, the colour of young leaves, the time of flowering and ripening fruits. They should observe the shape of the trunks, their modes of branching, the appearance of bark; and the attention should be drawn to such external features as leaf scars, lenticels, spines and tendrils.

The Flower—

The parts of the flower—simple types of inflorescence functions of the flower—pollination and seed production methods of pollination by insects and by the wind should be studied by actual observation.

The Fruit—

Types of fruit—dispersal of fruits and seeds—mechanical contrivances for dispersal. The pupils should become acquainted with the names of the common trees and shrubs of the neighbourhood, as also with those of the more common weeds of the garden and compound.

Books recommended.

1. Primer of Botany by P. F. Fyson (C.L.S. Press).
2. Botany for Secondary Schools by K. Rangachariar (Macmillan).
3. Short chapters of Nature Study by M. J. LeGo (Macmillan).
4. Introduction to Tropical Botany by M. J. LeGo (Macmillan).

GEOGRAPHY.

India to be studied regionally and in outline, with descriptive treatment.

One continent, or the British Isles, to be prescribed year to year, by the Board; study to be regional—and descriptive. In the case of continents special attention to be paid to parts of the British Empire.

MIDDLE SCHOOL.

DOMESTIC ECONOMY.

I. Food.

Choice—principles—methods of cooking—estimates of prices for meals.

An Indian kitchen—the cleaning of utensils.

Cooking.—Stewing—eggs—tea—coffee—cunje—beef tea—simple puddings—custards—rock—cakes.

II. Housewifery.

Care of bed room—care of dining room including China, glass plate, laying table.

Care of house linen—supplying and mending.

Income and expenditure.

III. Laundry.

Washing and Ironing.

Making of boiling water starch.

Taking out stains.

IV. First Aid.

Simple remedies

Home Nursing.—To take temperatures, give medicine, make a bed—wait on a patient.

HYGIENE.

I. Air.

Composition; sources of impurity.

The Respiratory system; Ventilation.

II. Water.

Composition; sources of supply; sources of impurity; methods of purifying water.

Characteristics of good drinking water.

Diseases due to drinking impure water.

III. Food.

Classification, uses and nature of foodstuffs.

Energy obtainable from food.

Diets and hours of eating. The digestibility and cooking of food—diseases attributed to food.

IV. Physiology.

The skeleton.

MIDDLE SCHOOL

SCIENCE.

First Term.

1. *Biological section.*—Life history and habits of wasp and bee.
2. Study of a few typical flowers; plan of a flower.
3. Change of flower to fruit; collection and examination of fruits; classification, methods of seed dispersal.
4. Winter sleep of seeds and other plant forms.
The planting of sleeping bulbs.
Winter sleep of animals.

Second Term.

1. *Trees* which drop their leaves in the cold weather and which do not. Recognition of leafless trees by (1) branching, (2) bark, (3) buds. Examination of buds.
2. Seed-sowing. The forms of familiar seeds.
How the farmer and gardener sow.
3. Seeds grown for study in lamp chimneys, gas jars or test tubes.

Diagrams of growth. Discovery that (1) water is needed for germination, (2) light is needed for healthy growth and (3) that seedlings grown apart from soil die when cotyledons are exhausted.

4. Subjects to be taken while seed-growing is in progress:—
 - (a) Study of structure of seed and bulb. Were the shoots originally packed within?
 - (b) Comparison for seed with egg; study of hen's egg; Parental care of birds.
 - (c) Frog's eggs; weekly record of change, habits of frogs.

Third Term.

Studies of plants and animals to be pursued concurrently.

1. Plant life. Typical spring and summer flowers; need for classification; some natural orders.

How to use a 'Flora.'

Insect visitors to flowers. Transference of pollen, meaning of pollination, fertilization and cross fertilization.

2. Animal life in the pond or small tank.

- (a) Record of growth and metamorphosis of tad-poles.
- (b) Life history and habits of: water beetle, water-boatman, water scorpion, dragon fly, mosquito, water spider, water snail.
- (c) Common tank weeds.
- (d) Study of green water plants in aquaria.

Evolution of gas noted for future investigation.

Note.—It is desirable that formal work should be supplemented by (a) excursions to study animals, plants in their natural setting, (b) holiday work including collection of specimens, records of life phases of some animal or plant, drawings or painting, (c) Gardening. Common plots may be worked in school hours for demonstrations and experiments; individual plots in leisure hours.

PHYSICAL SECTION.

A.—General Physics.

N.B.—Under this title are grouped simple exercises preparatory to the formal study of hydrostatics, mechanics and the properties of matter. Much of the work should be taken in close association with the course in mathematics.

1. Density and specific gravity. Determination of weights by the balance and of volume by calculation or displacement.
2. The mechanism of the balance and the conditions for true weighing. The laws of the lever. The grocer's scales. Weighing machines. The pressure on the fulcrum of a loaded lever. The centre of gravity of a body as a fulcrum and as the centre of the weights of its parts.

Experiments, toys, etc., illustrating stable and unstable equilibrium. Simple calculations and experiments on centre of gravity, etc.

3. Time-measurement. Essential of the mechanism of a simple clock driven by a weight or a spring and controlled by pendulum.

Isochronism of the pendulum. Effects of floating or changing length of pendulum. The 'simple' pendulum, connexion between swing—period and length.

Ancient time measures, the water clock, the hour glass, etc.

4. Examination of common pieces of mechanism such as a door lock, three speed gear of a bicycle. (There is scope here for individual work involving written description aided by diagrams, etc.)

5. The mariner's compass, simple investigation of properties of magnets to elucidate its use.

B.—Heat.

1. The varying warmth and coldness of weather as dependent on the season, direction of the wind, etc. The thermometer; how it works; expansion of mercury. Necessity of a standard scale of graduation (compare weights and measures). Experimental graduation of a thermometer by placing it in hot and cold water together with a thermometer already graduated.

2. Expansion as a phenomenon generally accompanying heating. Rough estimates of expansion of water and metal rods. Expansion and pressure—increase of heated air. Geographical applications.

3. Examination of the steady heating and cooling of water; discovery of constancy of temperature during boiling, freezing. Definite melting and boiling points of substances. Freezing of salt water.

Change of volume on solidification, ice type metal, dentist's filling.

4. Maximum and minimum thermometers; construction of temperature charts.

N.B.—Records of wind—directions and rainfall should also be kept throughout the year.



AGENTS FOR THE SALE OF MADRAS GOVERNMENT PUBLICATIONS.

IN INDIA.

BUTTERWORTH & Co. (LTD.), 6, Hastings Street, Calcutta.
 R. CAMBRAY & Co., Calcutta.
 E. M. GOPALAKRISHNA KONE, Pudumantapam, Madras.
 HARTLEY, Mount Road, Madras.
 HIGGINBOTHAMS (LTD.), Mount Road, Madras.
 V. KALYANARAMA IYER & Co., Esplanade, Madras.
 G. C. LOGANATHAN BROTHERS, Madras.
 S. MURTHY & Co., Madras.
 G. A. NATESAN & Co., Madras.
 The Superintendent, NAZAR KANTY HIND PRESS, Allahabad.
 P. R. RAMA IYER & Co., Madras.
 RAMAKRISHNA & SONS, Lahore.
 R. SENDER PANDURANG, Kalbadevi Road, Bombay.
 D. B. TARAPOREVALA SONS & Co., Bombay.
 THACKER & Co. (LTD.), Bombay.
 THACKER, SPIKE & Co., 3, Esplanade East, Calcutta.
 S. VAS & Co., Madras.
 S. P. C. K. PRESS, Vepery, Madras.

IN THE UNITED KINGDOM.

B. H. BLACKWELL, 50 and 51, Broad Street, Oxford.
 CONSTABLE & Co., 10, Orange Street, Leicester Square, London, W.C.
 DRIGHTON, BELL & Co. (LTD.), Cambridge.
 T. FISHER UNWIN (LTD.), 1, Adelphi Terrace, London, W.C.
 GRINDLAY & Co., 54, Parliament Street, London, S.W.
 HEGAN PAUL, TRENCH, TRENCH & Co. (LTD.), 68-74, Carter Lane, London, E.C.
 HENRY S. KING & Co., 65, Cornhill, London, E.C.
 P. S. KING & SON, 2 and 4, Great Smith Street, Westminster, London, S.W.
 LUZAC & Co., 46, Great Russell Street, London, W.C.
 B. QUARITCH, 11, Grafton Street, New Bond Street, London, W.
 W. THACKER & Co., 2, Creed Lane, London, E.C.
 OLIVER AND BOYD, Tweeddale Court, Edinburgh.
 E. PONSOMBY (LTD.), 116, Grafton Street, Dublin.
 W. WESLEY & SON, 25, Essex Street, Strand, London.

ON THE CONTINENT.

ERNEST LEROUX, 25, Rue Bonaparte, Paris.
 MARTINUS NIJHOFF, The Hague, Holland.



Sectt. 11-26 (a)-29,692-11-2-21.

Received.....192 Registered.....192

Abstract.

Law (Education) DEPARTMENT.

G.O. No.996

, dated 2nd July 1921.

ENCLOSURE.

No.

READ the following papers:—

From the Director of Public Instruction, No.6680/19
 dated 12th April 1921

ORDER

The revised curricula and syllabuses for European schools submitted by the Director of Public Instruction with his letter read above, are approved and will take effect from the 1st January 1921, on the understanding that after trial for a period of one year they will undergo further revision in the light of practical experience and such criticisms as may then be forthcoming, a revised edition of the curricula complete itself will then be prepared. The enclosure to the Director's letter is incomplete without reference to existing school courses and the arrangement is obscured by the absence of clear section heads and paragraph numbers; one notable omission is the want of any reference to the circular instruction to schools prescribing aggregate pass minima of 350 and 320 respectively for the High and Middle school examinations.

2. The Government also sanction the proposal

Director to abolish the Primary scholarship examination
and to award the open primary scholarships in the same
way as the special primary scholarships are now awarded.

3. The Director of Public Instruction is requested to
submit the necessary amendments to the Code of Regulations
for European schools.

(By order of the Governor in Council)

R. Ramachandra Rao
Secretary.

The Director of Public Instruction.

Forwarded to the Director of Public Instruction.
(By order)

Superintendent.

16
Law (Ed.) Dept.
Subject Revised Curricula and Syllabuses
for European Schools
[C. no 1313 B] from the D.P.D. no 6680/19 of 12.4.21

In 1908 ^{Separate} ~~for~~ Sets of Curricula were pres-
cribed for the following five classes of European
Schools:—

A- High Schools preparing pupils for the Uni-
versity or for the liberal professions.

AA- High Schools preparing pupils for admission
to Technical Schools & Colleges for entrance on a com-
mercial or industrial career or for work in a Govt.
dept. not requiring a university training.

B. Middle Schools preparing pupils for A
BB- do do AA

BBB do for some
profession for which a High School course is
not required..

(9) -Vide p. 6 of G.O. 364 Ed. of 13.5.08

2. ~~Since 1908~~ in 1911 these curricula were
found to be in need of considerable modifications
and the D.P.D. proposed to ~~reissue~~ issue revised
Curricula & Syllabuses as a Supplement to the
Code of Regulations for European Schools - Vide

(R) p. 3 of G.O. 361-62 of 10.6.11.

3. The Conference on the Education of the
Domestic

Domestic Community, held in Simla in July, 1912.
Supported a Scheme by which all Schools above
the elementary should be graded as either "Secondary"
with a practical curriculum - or "Collegiate" with a
"Curriculum leading to Universities and Liberal
"professions". In their letter to India no. 2398
28.2.14 this Govt pointed out that the classification
of Schools suggested by the Conference already
existed in this Presidency, ^{in an elaborate form,} and that these Schools
were allowed to select and follow one or the other
of the Curricula ~~presented~~ approved in G.O. no.
364 D.I. 133.08; but that the Scheme had failed
for the reasons explained in para 3(2) of the letter.
-Vide also Sir Alfred Bourne's remarks on resolution
no. II on pp 7-8 of G.O. 238 of 28.2.14. The other local
Govts. also whom the Govt. of India consulted in
the matter, almost without exception deprecated
the introduction of the grading proposed by the Conference.
The Govt. of India too agreed in considering that it is
was better to offer to a School a choice of courses than to
introduce a distinction between practical and
literary Schools in the manner proposed by the
Conference.

4. In the Curricula now subd. to Govt. by the
D.P.D. there is only one curriculum for all high
Schools and another for all middle Schools. In the
circumstances noted above this may be accepted.

cf para 4 of 307 G.O.
124 of 1-2-17 & Res. II
no. 4 of G.O. 70 of 29-1-13

Para 3(2) of the letter at

Vide para 4 of 307
G.O. 124 of 1-2-17

pp. 13-17 CF

Foot Q

18 8 3
5. In the curricula approved in 1908, a second language was prescribed as a compulsory subject for all middle schools - vide pp 7-8

Q. of 4.0364 of 13.5.08. In the Curricula now under consideration a second language is compulsory only in the high school classes & optional in the middle schools. The curricula having been drawn in consultation with the European Schools Examination Bd. and the headmasters of selected European schools we need not perhaps object to the second language being treated as an optional subject in the middle schools.

regarding the retention of vernacular language in the curricula of studies - flag V

pp 3-4 CF

In this connection attention is solicited to a petition from certain Anglo-Indians. 6. A no. of optional subjects are prescribed and candidates are allowed to bring up not more than eight subjects in the high schools and six in the middle schools. But the minimum no. of subjects that should be taken up is not prescribed. ^{But it seems desirable to fix a minimum number of optional subjects.} ^(perhaps) ^{by the European school Exm Bd on the ground} ^{necessary} that each school may be expected to teach as many subjects as ^{it} ~~they~~ can.

2. Again the object of grouping the optional subjects into groups (A) & (B) is not clear. The S.P.D. may perhaps be asked to add a footnote explaining the object in grouping these subjects unless the grouping is intended merely to indicate that the percentage of marks required for a pass is different in the different groups.

Vide the no. of marks & the percentage on pp 3 & 4 CF

8. Primary Scholarship examination.

Please see articles 93 & 103 of the Code of Regulations for European Schools. This examination has been instituted for the award of ^{the} primary Scholarships referred to in articles 102 & 103 of the Code. Under article 90 ~~the D.P.D. makes such arrangements as he thinks best for holding the Primary~~ there are to be no examinations of Primary Schools except such as the Inspector may consider necessary for the purpose of his inspection which will be conducted in situ. Moreover the Conference on the Education of the domiciled Community passed the following resolution:-

cf article 88 of the Code

p. 6 of G.O. 703/29 1-13
⑤

Res. IX - Award of Scholarships - "The Conference are of opinion that it must be left to the depts to decide the best way in which to award Scholarships but they record a strong opinion that boys & girls of 11 & 12 years of age ought not to be submitted to the strain of a competitive examination."

Vide para (9) on p. 19 of flay (10)

This Govt. agreed with this conclusion of the Conference and the Govt. of India also expressed their sympathy with the views held by the Conference in this respect and left it in the hands of local ^{whether rises} Govts. to decide as to how to give effect to the resolution. ~~It is also to be noted that several~~ ~~Provinces have abolished the~~ The D.P.D.'s proposal to abolish the primary Scholarship examination.

para 18 sub 8 of G.O. 1243/12-17
⑦

[Faint, mostly illegible handwritten text, likely bleed-through from the reverse side of the page.]

REGISTRAR HOME DEPARTMENT
21 JUN 1921
GOVT. OF INDIA

13 MAY 1921

Sp CF & NF with
the last at flag n
20.13/3B-1 Ed 8/12.5.2

REGISTRAR HOME DEPARTMENT
12 MAY 1921
GOVT. OF INDIA

no. 273
20.6.21

En 1919 B
u.6.21.

5
Which is supported by the R^d of Examiners for European
Examination may therefore be approved.

7. For order whether the remarks of the D.P.I.
may be called for u.o. on ~~the~~ paras 5, 6 & 7 ante. If
this is not considered necessary the draft order
Subd below is for approval.

ad
23.4.21
3.5.21

2nd
10/5/21

Secy.

The D.P.I. had better see the
remarks in paras 5, 6 & 7 above.

11/5/21

DP 2 uoy

U.O.No. dated

I should prefer that, where one Second Language
alone is taken, as in the Middle School, it should be
a vernacular of India, and that, where two languages
other than English are taken, as in the High School,
or where only one Second Language is taken in the
High School, it should be a vernacular of India. In
order to allow scholars, who are likely to go to

England

England to complete their education, to specialise in languages other than a vernacular of India, I should give power to the Inspector to exempt particular candidates from taking a vernacular.

2. In this country, I should favour the placing of a Second Language, if it were a vernacular, as compulsory for the Middle School course, and if the curricula had not been drawn up in consultation with the European School Examination Board and the Headmasters of selected European Schools, I should advocate the transfer of Second Language from the Optional Group A. to the Compulsory Group of the Middle School.

3. The aggregate number of marks fixed for a pass both for the High School and for the Middle School--(350 and 320 respectively)--was laid down by the Board. This aggregate is not shewn in the printed pamphlet, which, I am informed, had to be printed hurriedly, but the schools were informed by a circular of the minimum number of marks required for a pass. It was therefore not considered necessary to fix a minimum number of optionals as an aggregate number of marks is necessary for a pass, and the aggregate cannot be obtained without a sufficiently large number of subjects being studied.

4. Group A. subjects are considered as more important than Group B. subjects and are allotted a larger number of marks, the idea being to encourage schools

22

12 7

schools to take up the more important subjects.

5. The Inspector and the Board of Examiners for European Schools were of opinion that the new scheme should be tried for a year, when, if necessary, improvements might be made. They propose therefore, after the next examinations, to consider criticisms that may be made and if necessary to suggest improvements which may be considered and if approved, inserted in a revised edition of the Curricula. The new scheme is not considered perfect, but it is generally considered a decided improvement upon the old scheme.

Handwritten signature/initials



Recd 21-6-21

Low (Doy) Dept

The D.P.D. contemplates the issue of a revised edition of the Curricula next year, if necessary after the trial of this new scheme for a year. The points on which he has offered his remarks above will no doubt be considered on that occasion. The draft order in the file may now issue.

Handwritten date: 23/6/21

Handwritten initials: AD 22-6-21

Handwritten initials: Ld 26/6/21

Handwritten letter: C1

Handwritten text: Line as amended.

Handwritten date: 25-6-21

Handwritten notes:
 U.S.
 Paul Evans the
 H.M. 20/6/21

Handwritten text: Mrs. Lister

25

23

H.M.'s amendment is in accordance with the D.P.D.'s note on pp 5-7 ante. Submitted the draft as amended ~~was~~ issue.

CC 28/6/21 Para. 3 of the draft may be omitted since it is proposed that revised curricula complete in itself ~~after~~ should be prepared after a year. The sentence

"A revised edition of the curricula

"complete in itself ~~should~~ ^{will} then

"be prepared" in the H.M.'s amendment may be altered as follows.

"A revised edition of the curricula complete in itself should then

be prepared and submitted to Govt for approval." When

approving the revised edition of the Curricula, the D.P.D. may be

asked to submit the necessary amendments to the Code of Regulations for European Schools.

La 28.6.21

La 29.6.21

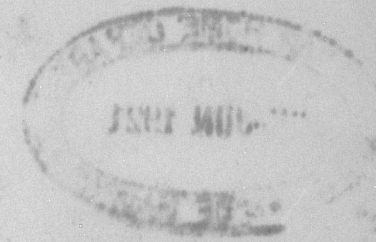
Secy.

The doubling issue as passed by H.M.

20/6/21



What is understood. La



What is understood. La

READ AGAIN G.O. No. 192 . DATED

CURRENT No.

ENCLOSURES TO O. No.

ORDER OF GOVERNMENT ..	..	..	..	A	A	A	A	A	A
------------------------	----	----	----	---	---	---	---	---	---

LETTER OF GOVERNMENT.

STATEMENT WITH DITTO.

PAPERS NOT FILED UP, BEING MEANT FOR DESPATCH
IN ORIGINAL.

N.B.—

A = Copy in full.
B = Not to be copied.
P = Copy abstract only.
Q = Copy heading only.