

MIDDLESEX REGIONAL EXAMINING BOARD

for the Certificate of Secondary Education

**REGULATIONS
AND SYLLABUSES
1966**

Internationales Schulbuchinstitut

Braunschweig

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MIDDLESEX REGIONAL EXAMINING BOARD
THE OLD COURT HOUSE, HIGH STREET,
WEALDSTONE, HARROW, MIDDLESEX.

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MIDDLESEX REGIONAL EXAMINING BOARD

for the Certificate of Secondary Education

INTRODUCTION

The Constitution of the Middlesex Regional Examining Board was framed by a Working Party representing teachers and education officers in Middlesex, and is published separately.

The Board has been recognised by the Secretary of State for Education and Science as one of the approved Examining Boards for the Certificate of Secondary Education.

While the principle that the Region should not be co-terminous with the area of any Local Education Authority is accepted, it is proposed that, under the provision made by the Department of Education and Science for transitional arrangements, the Board shall in the first instance provide examinations for schools within the area of the present administrative County of Middlesex. After April 1st, 1965 when the administrative county ceases to exist, the area concerned will be that of those Greater London Boroughs and parts thereof which fall within the present County of Middlesex. This arrangement will not preclude the admission of adjacent areas at a later date.

MEMBERS OF THE GOVERNING COUNCIL OF THE BOARD

Mrs. M. R. Forbes, C.B.E., J.P., G.L.C., *Chairman*

S. W. B. Watson, B.Sc., *Vice-Chairman*

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J. J. Currie

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National Association of Head Teachers

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A. Woodrow, B.A.

Teachers Representing Nine London Boroughs Elected by Free Vote

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Miss A. Bell (Hounslow)

Miss R. M. Allen, B.A. (Hillingdon)

Miss D. G. Hubbard, M.A. (Ealing)

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G. G. Powell, L.ès.L. (Haringey)

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Vacancy

Representative of the University of London Institute of Education

Miss N. Martin, M.A.

Representatives of Local Education Authorities

Mrs. M. R. Forbes, C.B.E., J.P., G.L.C.
R. E. Brettle, M.A., D.PHIL.
S. L. Chamberlain, M.A.
D. B. Denny, M.A.
A. T. Dodd, B.sc.
W. H. J. Knight, M.A.
P. J. Lee, B.A.
Miss C. A. Pratt, B.sc.
W. K. Waiting, B.A., M.ED.

Representatives of Industry and Commerce

I. H. Child, B.SC.(ENG.), A.M.I.E.E.
Vacancy

Assessors

Representative of another Regional Examining Board

A. J. Scott

H. M. Inspector

J. J. Sullivan, H.M.I.

L.E.A. Inspector

R. S. Ball

Youth Employment Service

Miss E. M. Wanstall, M.B.E., M.A.

Officers of the Department of Education and Science

G. S. Bosworth, M.A., M.I.E.E., M.I.MECH.E., A.R.A.E.S.
C. Priestley

Secretary to the Board

W. J. Leake, B.A.

PREFACE

1. Why the C.S.E. was established

The introduction of the Certificate of Secondary Education is, in a real sense, a measure of the great advances made in secondary education in this country during the last twenty years. The Education Act of 1944 established the principle of secondary education for all: the word 'secondary' was used not only in its chronological sense, as a stage in the educational process, but also qualitatively, to indicate a thorough-going widening of its scope; and the word 'all' was used to stress the fact that the benefits of secondary education were to be made available to children in all types of school, selective and non-selective alike.

During the 1950's the development of universal secondary education led to an ever-increasing number of children in non-selective schools staying on for a fifth year and entering, with a fair measure of success, for the General Certificate of Education at Ordinary Level; by the end of the decade they accounted for more than a third of the total number of candidates for this examination. But the G.C.E. had not been designed as an examination suited to their needs; its standards are derived largely from considerations of university entrance requirements. Seven of the eight examining boards for the G.C.E. are departments of, or closely associated with, universities; and the eighth, the Associated Examining Board, which was established specifically to provide a G.C.E. with an approach more suited to the needs of the growing number of candidates from secondary modern and secondary technical schools, is nevertheless obliged to ensure that its standards are comparable with those of the university boards. Thus, only a relatively small proportion of the children completing a five-year course in non-selective schools have had the opportunity of taking a nationally recognised examination compatible with their proven ability and attainment. The remainder, many of whom were known to have ability which was by no means negligible, were denied this opportunity. The result was the introduction of a large number of regional and local examinations for secondary school pupils for whom the G.C.E. 'O' level examination was not appropriate. But these examinations did not follow any sort of uniform pattern or standard; some were for pupils in their fourth year, others for pupils in their fifth year; few possessed any currency outside the region or area in which they were held.

The Secondary School Examinations Council (the advisory body to the Ministry of Education on all matters pertaining to school examinations) considered this proliferation of local and regional examinations to be unsatisfactory and appointed a committee to review the situation. The report of this committee, known as the Beloe Report (after Mr. R. Beloe, C.B.E., the chairman), was published in 1960 and recommended the introduction of a new national examination which would supersede all these examinations. This new examination

would be taken by pupils at the end of the fifth year of a secondary school course which was more appropriate to their needs than one leading to G.C.E. The Beloe Report was accepted by the S.S.E.C. and the Ministry of Education and, in a series of S.S.E.C. Reports and Bulletins over the following three years, the nature and form of the new Certificate of Secondary Education emerged. The opportunity was taken, not merely to establish another public examination on traditional lines, but to infuse new thinking into the whole concept of examinations and how they should be conducted; the result is an examination which will reflect and measure the rising standards of secondary education without exerting any inhibiting influence on the curricula of the schools, and which, at the same time, will provide the maximum amount of information about candidates for employers and other users of the certificate.

2. How the C.S.E. is to be administered

The Certificate of Secondary Education will be a *national* examination; it will be recognised by the Department of Education and Science and all certificates issued to candidates will be countersigned on behalf of the Secretary of State by an officer of the Department. For both educational and administrative reasons, however, the examination will be conducted by fourteen *regional* examining boards, of which the Middlesex Regional Examining Board is one. The Department of Education and Science will act as a co-ordinating body to ensure that the standards of the regional boards are comparable. In all other respects, the regional examining boards are completely autonomous bodies. They have been constituted in such a way that all the various organisations interested in education within each region are represented and that the examination is effectively under the control of teachers. The Constitution of the Middlesex Regional Examining Board has been published separately and copies may be obtained from the Board's offices.

3. The aims of the C.S.E.

Many external examinations have had the effect, however unintentionally, of dictating to a considerable extent the content of school curricula. The C.S.E., on the other hand, will be the servant of the schools, not their master; it will reflect, measure and, it is hoped, enhance the rising standards in the schools and encourage their freedom to develop their courses of study in the way they think best for their pupils.

4. How the aims of the C.S.E. will be realised

The school-based philosophy of the C.S.E. will be realised in two ways. First, the standards of the examination will be *determined by the teachers* in the schools for whom it is designed; it follows that those who are entrusted with the final responsibility for the work that is carried out in the schools must also control the examinations which measure its achievement. Secondly, every school will be able to choose from three types or modes of examination: (i) external examinations on syllabuses prescribed by the regional board, (ii) external examinations on syllabuses drawn up by individual schools (or groups of schools) and approved

by the board, (iii) examinations set and marked internally by individual schools but moderated at each stage by the board.

5. The standards of the C.S.E.

It has been established that the standards of the C.S.E. will be the standards generally obtaining in the schools and that this will be effected by teacher-control. This does not mean that each school will be free to apply its own standards to the examination; the C.S.E. must have national validity and therefore all schools must decide on a common standard. A collective judgment of this sort can only be determined by empirical means over a period of time (as in the case of the G.C.E.) and even then is not capable of precise definition. However, this process will be assisted by reference to the type of candidates for whom the examination is intended and the form which their published assessments will take.

The candidates will come from a band of pupils extending from those who overlap the group taking the G.C.E. Ordinary Level examination to those who are a little below the average in ability. This is an appreciably broad band, estimated to range from the 21st to the 60th percentile of ability of all secondary school pupils in this country. It follows that the examination performances of such a wide range of candidates must be categorised, and that the pass/fail system traditionally associated with examinations is not appropriate. The results in each subject will therefore be expressed as grades; there will be five grades, numbered 1 to 5. Two of these grades have been defined, as reference points:

Grade 1 will be awarded to a pupil whose ability is such that he might reasonably have secured a pass in the Ordinary Level G.C.E. examination had he followed a course of study leading to that examination instead of a C.S.E. course.

Grade 4 will be awarded to a pupil of average ability who has followed a course of study for the C.S.E. regarded by teachers of the subject as appropriate to his age, ability and aptitude.

The standards of grades 2 and 3 will be derived from these reference grades and candidates whose performance falls between grades 1 and 4 will be allotted to grades 2 and 3 in approximately equal numbers. Grade 5 will indicate a performance just below that to be expected from a pupil of average ability. All other performances will be ungraded.

6. The acceptability of the C.S.E.

Apart from its strictly educational functions, the C.S.E. will also aim to provide the sort of information about school leavers which employers and other users of the certificate will wish to have. It is no business of the examining boards to define the requirements of users in terms of the subjects and number of subjects candidates must take. Candidates will be free to take as many or as few subjects as they think appropriate and there will be no compulsory subjects. But users will expect the standards indicated in previous paragraphs to be maintained with reasonable consistency and it will be the concern and duty of the regional examining boards to ensure that they are. There are two considerations here. First, where users at present state their requirements in terms of passes at Ordinary

Level it is hoped that they will in future regard Grade 1 results in the C.S.E. as indicating a comparable level of ability and attainment. Secondly, it is to be hoped that users will recognise in the other graded results a useful yardstick of abilities which are well worth measuring and for which they have not previously had a nationally regulated educational assessment.

REGULATIONS

1. Date of the Examination

The examinations will be held annually in the Summer Term. The time-table will be issued in the previous September.

2. Eligibility for Entry to the Examination

(a) Candidates must be in attendance at schools recognised by the Board as approved centres for the examination and must be aged not less than sixteen on 1st September in the year of their examination; or be in the final term of the fifth year of a five-year course of secondary education; or have completed such a course.

(b) Where, for the time being, pupils are unable, because of the lack of secondary school facilities, to complete their fifth year except in an institution of further education, they may be entered by such institutions for the examination provided that they have completed, or are in the last term of, a five-year full-time course of secondary education taken partly in school and partly in an institution of further education.

(c) Other candidates may be accepted at the discretion of the Board.

(d) The Board will not accept work in any subject or paper for which a candidate has not been correctly entered.

(e) The Board reserves the right to decline any application for entry to the examinations.

3. Examination Centres

(a) Schools wishing to enter candidates for the examinations must apply for registration as an approved examination centre. Forms of application may be obtained from the Secretary to the Board and must be returned to him not later than 1st December in the year preceding the first examination for which it is proposed to enter candidates.

(b) A local examinations secretary must be nominated by each approved centre; normally this should be either the Head or the Deputy Head of the school. The local examinations secretary will act as correspondent with the Board and will be responsible for ensuring that the examinations are conducted in accordance with the Board's regulations. Detailed instructions on the conduct of the examination will be issued separately to local examinations secretaries. The Board will not correspond directly with candidates on any matter.

(c) The Board reserves the right to send a representative to a centre at any time to inspect the arrangements for the examinations and the manner in which they are conducted.

(d) The Board reserves the right to refuse or withdraw its approval of a school as an examination centre.

4. Modes of Examination

(a) There will be three modes of examination:

Mode 1: external examinations on syllabuses prescribed by the Board and published in this booklet.

Mode 2: external examinations on syllabuses drawn up by individual schools (or groups of schools) and approved by the Board.

Mode 3: examinations set and marked internally by individual schools (or groups of schools) but moderated at each stage by the Board.

(b) Schools may submit syllabuses for either Mode 2 or Mode 3 examinations in any subject which they consider suitable, irrespective of whether the subject is offered by the Board for Mode 1 examinations.

(c) Candidates may be entered for different Modes of examination in different subjects, but *not* in the same subject.

(d) Schools wishing to enter candidates for Mode 2 and Mode 3 examinations must submit their syllabuses, together with specimen question papers, to the Secretary to the Board by *31st March* of the year *preceding* that in which the examination will take place. Twenty copies of each syllabus and specimen paper should be sent.

(e) In the case of Mode 3 syllabuses which have been agreed by the Board, schools must submit for moderation by 30th November of the year preceding the examination:

- (i) draft question paper(s),
- (ii) detailed marking schemes.

5. Method of Entry

(a) Candidates must be entered for the examination by the local examinations secretary of each centre on forms obtainable from the Secretary to the Board.

(b) Completed entry forms must reach the Secretary to the Board not later than 28th February each year.

(c) Entry fees (see paragraph 6) are due at the time of entry.

(d) Candidates may be entered for as many subjects as may be thought desirable by the school.

6. Fees

(a) Entry fees will be subject to review annually.

(b) The fees payable for 1966 will be

- (i) a registration fee of 15s. for each *candidate*, and
- (ii) a subject fee of 25s. for each *subject* taken by each candidate.

(c) If a candidate's entry is withdrawn before 28th February, the subject fee(s) may be refunded at the discretion of the Secretary to the Board.

(d) If a candidate's entry is withdrawn after 28th February or if a candidate is absent from the examination in any subject(s) through sickness or any other

reason deemed to be adequate, the subject fee(s) may be refunded at the discretion of the Secretary to the Board. In this connection, the Board reserves the right to call for such medical certificates or other reports as it may consider necessary.

(e) No refund of subject fee(s) will be made in respect of candidates who are absent from only part of the examination in any subject(s).

(f) In no circumstances will the registration fee be refunded.

7. Results

(a) At the earliest opportunity after the examination, the Board will communicate in confidence to the local examinations secretary of each centre presenting candidates the results obtained by those candidates.

(b) In each subject the results will be expressed in the form of five grades of success (1-5), the remainder being ungraded (U). The grades are defined in paragraph 5 of the Preface.

8. Certificates

(a) Certificates of Secondary Education will be issued by the Board to those candidates who are awarded at least one grade in the range 1-4 inclusive; where issued, certificates will also record grade 5 results. All other grade 5 results and all ungraded results will not be recorded on certificates.

(b) Certificates will be signed by the Chairman of the Governing Council of the Board and the Secretary to the Board and countersigned on behalf of the Secretary of State for Education and Science by an officer of the Department.

(c) Certificates will be sent by the Board to local examinations secretaries, who will be responsible for distributing them to candidates.

(d) At the discretion of the Board, a duplicate certificate may be issued, on payment of a fee of 10s., to replace an original which has been lost or destroyed.

9. Disqualification

(a) The name of any candidate who uses or attempts to use irregular or unfair practices during an examination must be reported to the Secretary to the Board by local examinations secretaries. The Board may at their discretion disqualify any such candidate from the whole examination.

(b) The Board may also at their discretion withdraw a certificate from any candidate who they may find, subsequent to its award, to have obtained it by unfair means.

SECTION 1—ART AND ASSOCIATED CRAFTS

SYLLABUS—ART AND ASSOCIATED CRAFTS

The syllabus is designed to encourage a wide range of expression through the use of various materials.

The examiners will attach considerable importance to sensitive use and awareness of line, form, space and colour and to the clear communication of ideas.

The examination will be in two parts:

Part 1: an exhibition of course work, for which 65% of the total marks will be allocated;

Part 2: a timed test for which 35% of the total marks will be allocated.

Candidates must reach an acceptable standard in both parts of the examination in order to obtain a graded result.

Part 1—Course Work

With the help of their Art teacher, candidates will be required to choose and set up a small exhibition of their own work.

The exhibition will include not less than *four* pieces of work. Candidates may offer both two- and three-dimensional work; portfolios and sketch books may also be shown.

The examiners will accept and assess any work which the candidate considers shows evidence of an understanding of, and interest in, art. A broad and imaginative range of work will be looked for; it is suggested that examples of work from two or more of the following fields of study should be included in the exhibition:

- (a) *Visual work from observation*
Drawing and painting in any media.
- (b) *Two-dimensional work*
Composition and design in any media or material.
- (c) *Three-dimensional work*
Creative developments in any materials or combination of materials.
- (d) *Appreciation of Art and Design*
Various aspects of art history and methods, including crafts. The relationship of design to everyday life.

Part 2—Timed Test

The examination will comprise four sections, each containing several tests. Candidates will be required to choose a test from one section. If time permits, a second test from another section may be chosen; in deciding on the number

of tests to undertake, candidates should consider the necessity of presenting to the examiners comprehensive evidence of creative, imaginative ability and skill, using any suitable materials.

The time allowed for the practical examination will be 5 hours, the first three of which must be in one session. The preparation of materials may be done before the examination. The work submitted may be of any reasonable size and shape.

The paper containing Sections 1, 2 and 3 will be given to candidates approximately 14 days before the date of the examination. The topics to be included in Section 4 will also be indicated at the same time. Preparatory drawings and sketch books may be used during the examination.

Section 1—Drawing and Painting from Observation

Analysis and relationships in the things we see.

Section 2—Composition in Two Dimensions

Painting or design showing an intelligent and able use of line, form and colour to express the candidates' reaction to subjects suggested by the examiners.

Section 3—Composition in Three Dimensions

Candidates should show evidence of appreciation of the concepts of volume and space and an understanding of the materials used to express their personal interpretation of the subject.

Section 4—Appreciation of Art and Design

Questions will be set to test understanding and appreciation of art and design and to give candidates a chance to show their personal awareness of communication through art and the place of art in contemporary society.

SECTION 2—COMMERCIAL SUBJECTS

SYLLABUS—COMMERCE

Commerce in its widest sense can be a valid educational pursuit for all pupils, including those who will not engage in it directly. It is hoped that the following syllabus will work upon the imagination of all candidates and serve to widen their experience.

There will be one written paper of 2 hours. The paper will be divided into two parts:

Part 1 (compulsory) will consist of 32 questions requiring short answers, perhaps of one word in some cases. 32% of the total marks will be allocated to Part 1.

Part 2 will consist of 8 questions requiring longer, essay-type answers, from which candidates will choose 4. 68% of the total marks will be allocated to Part 2.

Candidates must show a clear appreciation of the aim and purpose of business activities. A simple knowledge of procedures, forms and documents used in the daily conduct of business will be expected. Candidates should be aware of the purpose of such institutions as: Bankers' Clearing Houses, the Stock Exchange, the Baltic Exchange, Mincing Lane and Lloyds, but a detailed knowledge of their working is not expected.

The arrangement of the items in the syllabus does not mean that they should be taught in that order.

1. *Human Wants*—their satisfaction by the production of goods and services. The need for commerce as the result of specialisation by individuals and nations.

2. *Commerce*—its purpose and nature. A study of the following: Trade, Finance, Insurance, Communications and Transport.

3. *Organisation*—units of ownership including one-man businesses, partnerships, private and public companies, co-operative societies and special organisations which have emerged for the supply of essential services (e.g. water, gas, electricity, transport); the reasons for these organisations; their ownership, control and finance.

4. *Capital*—Sources of capital and disposal of profits. An understanding of fixed and working capital, rate of turnover, the relationship of turnover to gross and net profits, and the relationship of net profit to capital.

5. *Distribution*—(a) Retail Trade and functions of the retailer; various types of retail organisation and the reasons for their existence; the independent retailer; the department store; multiple stores; chain stores; retail co-operative societies;

mail-order houses. Modern trends, e.g. self-service, automatic vending, branding, packaging, after-sales service, proprietary articles.

(b) Wholesale Trade—functions of the wholesale merchant; the services of middlemen; organised markets; the purpose of the wholesale warehouse; co-operative wholesale societies and their functions.

6. *Trading*—Simple terms and conditions of sale; quantity, quality and price; discounts; credit sales; hire purchase. Sale by sample. Tenders and quotations. The necessity for records and the function of the principal documents used. Advertising. General principles of consumer protection; seals of approval and Consumers' Advisory Council (*Which*); quality markings. Trading stamps.

7. *The Means of Payment*—Money as a means of payment. Services provided by the Post Office. The relationship between the business man, the banks and clearing houses; the principal services of banks to industry, commerce and private individuals; loans, overdrafts, credit transfers; the cheque system; joint stock banks, trustee savings banks; the Bank of England.

8. *Communications and Transport*—The importance and use of business letters, telegrams, cables, telex and telephone; types of transport and reasons for the choice of one in preference to another for the carriage of goods; the importance of harbour and dock facilities and the work of port authorities, e.g. Port of London Authority.

9. *Insurance*—The risks of business and the distinction between insurable and non-insurable risks. The outline of procedure in effecting an insurance; the essentials of a contract of insurance.

10. *Foreign Trade*—The importance of foreign trade to the U.K. Functions of the Board of Trade.

SYLLABUS—PRINCIPLES OF ACCOUNTS

The examination will test the understanding and interpretation of the elementary principles of accounts and the ability to record transactions by the double entry system.

There will be one written paper of 2 hours. Candidates will be required to answer five questions of increasing difficulty.

Accounts of sole traders and partnerships.

Books of Original Entry and documents from which these are written:

Cash Book.

Petty Cash Book.

Ledger Accounts.

Trial Balance.

Final Accounts.

Balance Sheet to be analysed under appropriate headings showing Fixed Assets, Current Assets, etc. so that Working Capital may easily be found.

Adjustments to include simple accruals, payments in advance and provision for bad debts.

Depreciation.

Stock Valuation.

Turnover and relation to profits.
Simple Reconciliation Statements.
Accounts of non-profit making organisations.
Manufacturing Accounts.
Departmental Accounts.
Amalgamation of existing partnerships.

SYLLABUS—SHORTHAND

Any system of Shorthand may be used which enables the candidates to write at a minimum speed of 50 words per minute.

The examination will comprise:

- (a) a printed passage of Shorthand of approximately 120 words to be transcribed by those candidates taking the speeds of 50 w.p.m., 60 w.p.m. and 70 w.p.m.;
- (b) dictation of everyday commercial matter at speeds of:
 - 50 w.p.m. (three minutes)
 - 60 w.p.m. (three minutes)
 - 70 w.p.m. (three minutes)
 - 80 w.p.m. (four minutes)
 - 90 w.p.m. (four minutes)
 - 100 w.p.m. (four minutes)

A different passage at each of these speeds is to be dictated on three separate occasions at intervals of at least three weeks to enable candidates to reach their maximum speed. The result of each of these tests will be made known before the next test is taken.

After dictation 1 hour is to be allowed for the transcription of one dictated passage and the printed passage where applicable. Transcription may be typewritten or handwritten. If candidates choose to type their transcripts they will not be penalised for typographical errors.

Original shorthand notes must be submitted with the transcript. While no marks will be allotted to the shorthand notes, failure to adhere to the system used may incur a penalty.

The speed at which a graded result is obtained will be endorsed on the Certificate.

SYLLABUS—SHORTHAND-TYPEWRITING

Shorthand-writing from dictation for typewritten transcript.

There will be one paper, consisting of:

1. A piece of ordinary, everyday commercial matter to be dictated in 2 minutes at a speed of 80 w.p.m.
2. A piece of ordinary, everyday commercial matter to be dictated in $2\frac{1}{2}$ minutes at a speed of 80 w.p.m.
3. A piece of ordinary, everyday commercial matter to be dictated in 3 minutes at a speed of 80 w.p.m.
4. A piece requiring display in any acceptable form, which may be the minutes of a meeting or a specification, to be dictated in 4 minutes at an average speed of 80 w.p.m.

There will be an interval of 1 minute between each piece.

The whole paper, including dictation, will be of 2 hours' duration.

Each piece will carry a total of 25 marks.

Original shorthand notes must be submitted with the transcripts. While no marks will be allotted to the shorthand notes, failure to adhere to the system used may incur a penalty.

Errors in spelling and punctuation will be penalised, but the use of a dictionary will be permitted.

SYLLABUS—TYPEWRITING

Development of speed and accuracy and the ability to apply skill to normal requirements of the business office.

To determine the speed-rating, five 10-minute tests of straightforward matter will be given over the five weeks preceding the examination. All five tests will be submitted to the examiner and the best speed will be indicated on each candidate's certificate. The basic speed minimum should be 25 w.p.m. The speed test will not carry any marks. The use of an eraser will not be permitted for these tests.

The examination will consist of one 2-hour paper consisting of five parts of increasing difficulty. Each part will carry 20 marks. An eraser may be used for all exercises.

Part 1: a straightforward copy piece (no heading).

Part 2: a letter with carbon copy from manuscript without any guidance as to display.

Part 3: a transfer of information to a form provided. (The correct procedure for the completion of forms varies from office to office, and candidates will be expected only to make the facts clear in their transcript.)

Part 4: a corrected manuscript of approximately foolscap length.

Part 5: a fairly complicated piece of tabulation from manuscript.

SECTION 3—DOMESTIC SUBJECTS

SYLLABUSES—HOUSECRAFT

Two alternative syllabuses are offered to provide for the interests of schools and the facilities available for housecraft.

The syllabuses have been drawn up on the assumption that candidates will have had a course covering both theory and practical work of approximately 3½ hours per week over the five terms preceding the examination.

The aim of the syllabuses is to cover the basic principles of home-making in its widest aspects.

For each syllabus the examination will be in three parts:

Part 1: a theory paper of 1½ hours for which 40 marks will be allocated;

Part 2: a practical test of 2½ hours, for which 60 marks will be allocated;

Part 3: an assessment by the teacher (expressed as a percentage mark) of course work done during the five terms preceding the examination.

The marks will be scaled to give a weighting of 60% for Parts 1 and 2 combined and 40% for Part 3.

A preparation period of 2 hours (including 15 minutes for choice of question) for the practical test will be allowed three days before the date on which the test is held. During this period candidates should choose the work they are to do (with book references), plan the order of work (with times and oven temperatures) and draw up a shopping list, for which prices should be indicated before the end of the examination.

SYLLABUS A

HOMEMAKING

The Home

(a) Budgeting: choice, cost, care and use of equipment in the home, hire purchase, house purchase, mortgages, buying, renting.

(b) Modern approach to routine work in the home in the light of present-day patterns of family living.

(c) Hygiene and safety in the home with reference to the young and the old. Simple first aid.

Food

Budgeting, preparation and serving of simple, well balanced meals, including the use of present-day commodities. Food values.

Grooming

- (a) Hygiene.
- (b) Care of clothes and valeting.
- (c) Use of hand and machine washing, laundries and launderettes.

SYLLABUS B

COOKERY AND ENTERTAINING

Home

- (a) Social customs, including invitations, flower arrangements, table setting, care of table linen.
- (b) Choice, care and use of equipment used in the preparation of meals.

Food

- (a) Meals for all occasions and circumstances which may include the intelligent use of present-day commodities.
- (b) Simple food values.
- (c) Marketing, storage and preservation of food.
- (d) Economy in the kitchen.

Hygiene

Hygiene and safety in the kitchen.

SYLLABUS—NEEDLECRAFT (DRESS)

The examination will be in three parts:

- Part 1:** a practical examination of 2½ hours, plus 15 minutes for preparation. 40% of the total marks will be allocated to this part. Work may be pressed and labelled after the examination.
- Part 2:** a written paper of 1½ hours, plus 15 minutes to read the paper. 30% of the total marks will be allocated to this part. There will be one section with questions requiring short answers. Candidates will be asked to answer 10 questions out of 15. There will be another section from which candidates will choose two out of five questions requiring longer answers.
- Part 3:** prepared course work, to include (i) at least 2 garments made during course, one of which may, if desired, be assessed at the end of the 4th year, (ii) a journal or folder showing evidence of study of some aspect of the craft. 30% of the total marks will be allocated to this part (of which 5% will be for the journal and 25% for the garment).

SYLLABUS

1. *Clothes planning*—limited to planning garments for appropriate occasions, suitable materials etc. Costing and budgeting. Good grooming. Valeting.
2. *Fabrics*—elementary knowledge of source of fibres and their use in modern life.
3. *Maintenance of clothing*, as applied to everyday life. Quick modern methods of repair.

4. *Commercial patterns.* Thorough knowledge and understanding of commercial patterns and simple adaptations. Placing on fabrics. Cutting out. Marking and tacking up.

5. *Use and care of sewing-machine and equipment for the craft.*

Processes taught should include:

- (a) *Stitches.* Constructive and decorative stitchery as applied to dressmaking.
- (b) *Seams.* Open, French, double-stitched, run and fell, overlaid.
- (c) *Disposal of fullness.* Pleats, tucks, darts, gathers, smocking.
- (d) *Bindings and facings.* Use of crossway strips.
- (e) *Collars.* Making and attaching straight and round collars.
- (f) *Sleeves.* Making and setting-in sleeves.
- (g) *Cuffs.* Making and fixing cuffs for long and short sleeves.
- (h) *Yokes.* Making and attaching yokes.
- (i) *Edge finishes.* Straight, shaped and curved hems.
- (j) *Openings,* e.g. continuous wrap opening, simple skirt placket, faced slit opening, bound opening, inserting zips.
- (k) *Fastenings,* e.g. buttons and buttonholes (worked and bound), press fasteners, hooks and eyes, buttons and worked loops.
- (l) *Pockets, belts and sashes.*
- (m) *Lingerie processes.*

SECTION 4—ENGLISH

SYLLABUS—ENGLISH

Introduction

English is one subject: pupils' verbal skills—their talking, writing and reading—develop as an organic whole, and should be tested as a whole. The three parts into which this examination is divided do not attempt to divide this whole, but correspond to three methods of testing.

Every teacher of English finds that he has to be aware of the boundaries of his pupils' 'real' world and the range of their imagination—if only in order to extend it. Thus, in this examination, they will be asked to talk, write and read about the reality they know, and that world of imagination that can be made alive to them. Only in this way can pupils do their best.

This examination is intended to respond faithfully to the needs and abilities of most candidates, and to encourage the greatest possible variety of imaginative work in English teaching.

Course Work (30% of the total marks)

Course work is an integral part of the examination. It should consist of a folder containing at least 10 pieces of work which reflect the highest standards of the pupil from any part of the two-year period prior to the examination. It is envisaged that the work will be chosen by teacher and pupil in collaboration as the folder is made up. Normally these pieces of work will be first drafts—but a revised draft may be submitted, provided that the original work is also included.

The course work must include examples of:

- (i) creative writing (prose or verse);
- (ii) some response to books the pupils have read. (Since a pupil's most vital response to what he reads is often to be fully tapped only immediately after the reading, it is envisaged that much of the *detailed* writing about books will find its appropriate place here.)

It may also include writing arising from a sustained effort in the study of some topic or theme.

Formal exercises will not be accepted.

Course work will be assessed initially within the schools and moderated by the Board.

Reference should be made to the Book List published by the Board which is intended to give helpful guidance (not direction) in reading. Additionally, it is hoped that the Book List will illustrate the quality and range of reading material expected by the examiners.

The Written Papers (50% of the total marks)

There will be two written papers of a total duration of three to four hours.

The four categories enumerated below seek to define the areas of the candidates' experience and abilities that are to be examined; they do not necessarily indicate the precise form which the questions will take. It is not envisaged that the practice of examination questions will be an appropriate preparation for these papers. The categories are as follows:

(i) The ability to understand and respond to what is genuinely significant in a passage or poem of some literary quality. The passage may often be narrative; its content will be of a kind in which candidates can become interested and involved; and it will deal honestly with situations and personal relationships within the likely range of the candidates' real experience or imaginative grasp. There will be no questions on uncommon words or phrases isolated from their context; the candidates' sensitivity to language as a whole is to be tested, not their chance recognition of this or that word.

(ii) The ability to understand and manipulate straightforward, factual, informative material. The form which this test takes will vary from year to year; but it might well involve the selection or manipulation of facts relevant to a given situation such as candidates could readily enter into. Candidates might be asked to reproduce this information in their own writing in a form prescribed to them, perhaps in a report or letter.

(iii) The ability to write continuously on subjects within the candidates' likely experience (real or imaginative). Candidates will be given the option of writing one longer or two shorter compositions and, in general, about an hour will be allowed for this exercise. Candidates may write in prose or verse and some narrative subjects will be included. The stimulus for composition will not be restricted to verbal instruction, but may take the form of pictures, sound, objects etc.

(iv) The ability to express in continuous form a response to the wide reading of good writing. Candidates will be given an opportunity of writing on one, two or three subjects, based on such reading. Some questions will be very general in character; others will be related to a suggested list of named books; candidates will be free to choose the type of question preferred. A list of named books will be attached to the syllabus; but it is emphasised that the titles chosen are suggestions only, and that whilst questions will be set on these books, candidates will be able to answer this part of the paper without reference to these particular texts.

The questions on the named texts will sometimes refer to an individual text but will often be in the form of a more general question that can be answered from any one (or several, if the candidate wishes) of a *group* of texts.

Candidates will be permitted to take texts into the examination room; questions will be designed to test genuine personal response rather than the mere reproduction of memorised facts.

Spoken English (20% of the total marks)

The oral section of the examination is intended to test the candidates' ability to communicate clearly and sensibly, in a lively manner, by means of the spoken

word. It is not intended as an elocution test. Incoherent and indistinct speech will be penalised, but no candidate will be penalised because of accent.

The oral examination will consist of group discussion among five or six candidates with an external examiner who will select from lists of topics supplied in advance by the groups. Each group should supply three or four topics. An assessment of each candidate will also be required from the school, based on both formal and informal spoken English work done during the course. The assessment will be taken into account by the external examiner in arriving at his final assessment. (Details of the form which the teachers' assessments will take will be announced in advance of the examination.) Should a serious discrepancy arise between the two assessments of any candidate, a further oral test will be arranged.

A pupil certified by his Head Teacher as suffering from a speech defect may be excused the Oral Test, but he should not consider himself precluded from entering it.

SUGGESTED BOOK LIST: 1966 AND 1967

It is not envisaged that all the books on this list will be within the capacity of all candidates. Some are relatively lightweight works; others will call upon deeper resources of understanding and sensibility. Abridged editions may be used.

Shakespeare	<i>Macbeth; Twelfth Night.</i>
Shaw	<i>Androcles and the Lion.</i>
Wilde	<i>The Importance of Being Earnest.</i>
Wesker	<i>Roots.</i>
Arthur Miller	<i>All my Sons.</i>
J. Austen	<i>Northanger Abbey.</i>
Dickens	<i>Great Expectations.</i>
E. Brontë	<i>Wuthering Heights.</i>
Twain	<i>Huckleberry Finn.</i>
Wells	<i>The War of the Worlds.</i>
Orwell	<i>Animal Farm.</i>
Camus	<i>The Plague.</i>
Steinbeck	<i>The Pearl.</i>
Shute	<i>A Town Like Alice.</i>
Paton	<i>Cry, the Beloved Country.</i>
Golding	<i>Lord of the Flies.</i>
Hughes	<i>A High Wind in Jamaica.</i>
Wyndham	<i>The Chrysalids.</i>
Schaefer	<i>Shane.</i>
Broster	<i>The Flight of the Heron.</i>
Reid	<i>The Colditz Story.</i>
Barnes (ed.)	<i>Short Stories of our Time (Harrap).</i>
Barnes and Egford (ed.)	<i>Twentieth-Century Short Stories (Harrap).</i>

M. Gorky	<i>Childhood.</i>
Grimble	<i>A Pattern of Islands.</i>
Bader	<i>Reach for the Sky.</i>
Kitchin	<i>Brother to the Ox.</i>

General anthologies of poetry, and anthologies of poetry written in this century, such as:

- Rhyme and Reason* (O'Malley and Thompson; Chatto).
- Iron, Honey, Gold* (Holbrook; C.U.P.)
- Every Man will Shout* (Mansfield and Armstrong; Oxford).
- The Albemarle Book of Modern Verse* (Finn; Murray).
- Here To-day* (Hughes; Hutchinson Educational).
- The New Poetry* (Alvarez; Penguin).

SECTION 5—GEOGRAPHY, HISTORY, ECONOMICS, SOCIAL STUDIES

SYLLABUS—GEOGRAPHY OUTLINE

There will be two examination papers, each of $2\frac{1}{4}$ hours. For each paper, $\frac{1}{4}$ -hour of the time allotted will be used for studying the questions and written work will be permitted for 2 hours only.

Paper 1 will carry 45% of the total examination marks. The paper will consist of:

Section A—Compulsory. Time allowed: 30 minutes

This section will carry 12% of the total examination marks and will consist of a number of short-answer questions covering a wide variety of aspects of Geography in the world as a whole. The candidates will be expected to attempt as many questions as possible, and the answer papers will be collected at the end of 30 minutes. Written work will be resumed after 15 minutes, this period of time being allowed for studying the rest of the Paper, including the Ordnance Survey Map Extract.

Section B—Compulsory

This section will carry 9% of the total examination marks and will comprise a series of questions on an Ordnance Survey Map Extract. It is expected that the candidates will spend approximately 30 minutes on this section.

Section C

This section will carry 24% of the total examination marks and will contain a selection of longer-answer questions on the British Isles, arranged in three groups, the candidates to select one question from each group.

Paper 2 will carry 40% of the total examination marks. Five questions must be answered, including two from Section A, two from Section B, and one from either Section A or the Region already chosen in Section B. The paper will consist of:

Section A

Each question will carry 8% of the total examination marks and will consist of a selection of questions on:

- (a) simple rock types; land forms and erosion; weather study and simple climatic data;

(b) the chief commodities of world trade; the major Natural Regions of the world.

Both questions may be selected from *either* (a) or (b) or one may be taken from each.

Section B

Each answer will carry 8% of the total examination marks and will contain a selection of six questions on each of the following Continental Regions of the world, from which the candidate will select two, both chosen from ONE REGION ONLY.

The approximate Regions are given below, with more precise delineation in the detailed syllabus.

1. Western Europe. (Selected parts, excluding British Isles.)
2. North America.
3. Southern Continents. (Selected parts.)
4. U.S.S.R.
5. Monsoon Asia. (Selected parts.)

If the remaining question is selected from Section B, it must be from the same region as that already chosen for two answers.

Course Work

Course work done during the last two years of the course leading to the examination will be assessed as an integral part of the examination, and will carry 15% of the total examination marks.

DETAILED SYLLABUS

To attempt to examine the whole field of the Geography of the World, with its very varied methods of study and an even greater variety of material for study, would involve question papers beyond the scope of the Certificate of Secondary Education and the understanding of the candidates. Thus, while an outline of knowledge of the geographical conditions in the World as a whole will be the general result of a balanced five-year course (and this will be examined largely through the medium of simple, short-answer questions), the opportunity is provided for individual selection of fields of study within the school to suit local preference, and it is expected that these studies will be used to develop fully the varied techniques which may be employed. The method of approach should also be varied, and the decision made at school level. The techniques would include sketch-maps and diagrams of various types, interpretation of photographs and verbal descriptive passages, and the use of illustrative material from a wide variety of sources.

Paper 1

Section A

Varied forms of short-answer questions on general geographical background knowledge will be used in this compulsory Section. The candidates will be free to answer them in any order. The number will be such that the better candi-

dates only will be able to complete the whole set. The answers will be collected at the end of half an hour.

Section B

An Ordnance Survey Map Extract on a scale of either 1/63,360 or 1/25,000 will be provided, and may be accompanied by a photograph of part of the area shown on the map. Candidates will be expected to have a background knowledge of the Land Utilisation Maps on these two scales and the extension of information which they provide, but the extract will not be from the Land Utilisation Survey.

Questions on the map may be set to test knowledge and use of:

Scale.

Conventional signs.

Orientation (giving specific directions to 8 points of the compass).

Grid References (Six Figure).

Route finding and description.

Interpretation of simple land forms.

Correlation of routes and settlement patterns.

Cross-section diagrams may well be used in connection with course work on O.S. Maps, but their construction during the examination will not be required.

Approximately half an hour should be spent on this question, but the map may be related to a question in Section C of the paper, and will not be collected until the end of the paper.

Section C—The British Isles

Candidates will be required to answer THREE questions, to be chosen from a set of twelve. The questions will be arranged in three groups: Group 1 will contain three questions; Group 2 will contain four questions; Group 3 will contain five questions. ONE question must be answered from each group. The questions in each group will be varied in type, to permit a variety of approach in the study of different parts of the country. The groups have been arranged on a broad regional basis as indicated below.

Candidates should have a knowledge of the physical background of the geography of the British Isles, including the locations and names and basic scenic characteristics of the main upland and lowland areas (e.g. scarplands, mountains, fenlands, etc.) and main rivers. They should show elementary knowledge of the chief climatic characteristics of the British Isles, and be capable of simple explanations of the contrasts.

The Regional Groups

Group 1

- (a) Hampshire Basin.
- (b) S.E. England—Sussex, Kent and Surrey (excluding the Metropolitan area).
- (c) Thames Basin, including London and the London Basin.
- (d) Eastern England—from North Essex to the North Yorkshire Moors.

Group 2

- (a) The Midland Triangle.
- (b) South Lancashire and Cheshire.
- (c) Yorkshire, Derby, Nottingham Coalfield.
- (d) N.E. England, including the Cleveland Hills.
- (e) South Wales.
- (f) Central Lowlands of Scotland.

Group 3

- (a) S.W. England—Cornwall, Devon, Somerset and West Dorset.
- (b) The Pennines.
- (c) The Lake District.
- (d) Central and North Wales.
- (e) The Highlands of Scotland.
- (f) The Southern Uplands of Scotland.
- (g) Northern Ireland and Eire.

Paper 2

Section A

Answers to two questions will be required from this section, and the choice of questions will be arranged so that both may be taken from either parts (a) or (b) of the syllabus, or one from each. Questions may require picture, diagram or map interpretation. The influence of physical geography features on human activity (location of settlements, communications, soil erosion, etc.) will be emphasised where appropriate.

- (a) (i) *Simple rock formation.* Igneous, sedimentary, metamorphic; the recognition of the more obvious types of associated scenery. Man's use of rocks for building and industry (but omitting oil and mineral ores).
- (ii) *Land forms.* Fold mountains, block mountains, rifts and rift valleys, volcanoes, plateaux, plains.
- (iii) *Earth sculpture.* Recognition of the basic elements of the modelling of scenery through erosion and deposition: by rivers (e.g. the three stages of development of river valleys and their associated features, deltas, rias, lakes, etc.); by ice (e.g. corries, U-shaped valleys, hanging valleys, arêtes, moraines, ribbon lakes, fiords, etc.); by wind (e.g. sand-dunes, etched landscapes, wadis and desert rainfall, etc.); by sea (e.g. coastal erosion and transportation, stacks, caves, sand spits, etc.).
- (iv) *Weather studies.* Simple weather recording instruments—the thermometer (Centigrade and Fahrenheit—but conversion will not be required), an understanding of humidity and its measurement, the barometer, the rain gauge, the Stevenson Screen, measurement of wind speeds. The routine of daily recordings, and their meaning in relation to climatic data.

Factors influencing the distribution of temperature—latitude, altitude, distance from sea, aspect, land and sea breezes.

Isotherms, isobars and isohyets, and their definitions. Simple pressure systems and fronts, and their associated weather, leading to an

understanding of the daily weather reports issued by the Press, Radio and Television. Causes of rainfall—relief, cyclonic (frontal), convectional.

- (b) (i) *The natural regions of the world.* The regions are broadly defined by their natural boundaries. Each region may be considered under the following headings:
- (a) Location.
 - (b) Climate—temperature range, season(s) of rain, seasonal winds where applicable.
 - (c) Basic natural vegetation.
 - (d) Way of Life of the People.

The Regions

1. Equatorial Forest.
2. Savana.
3. Monsoon.
4. Hot Desert.
5. Mediterranean Type.
6. Temperate Lands.
7. Coniferous Forest.
8. Tundra.

- (ii) *The chief commodities of world trade.* These may be considered under the following headings, where appropriate:

- (a) Location of chief source regions.
- (b) Physical conditions for growth or emplacement.
- (c) Methods of production.
- (d) Marketing and routes to chief consumer regions.

The Commodities

1. *Cereals and foodstuffs, etc.* Wheat, Maize, Rice, Beef, Mutton, Dairy Produce, Sugar-cane, Fish, Tea, Coffee, Cocoa, Citrus fruits, Wine.
2. *Raw materials.* Cotton, Wool, Timber, Rubber, Common Vegetable Oils.
3. *Minerals.* Coal, Iron, Mineral Oil, Tin, Copper, Aluminium.

In part (b), a question may be set using an outline map of the World, on which candidates would be asked to locate features associated with this part of the syllabus more appropriately shown in map form, including the names of the Continents and Oceans, Ocean Currents, the Trade Routes (land, sea and air) and focal points on them, Latitude, Longitude, Time, International Date Line, Season(s) of Rain, Wind Belts, Natural Vegetation, Source regions of commodities, etc.

Section B

Two questions must be answered from any ONE of the following continental areas. Candidates will be expected to show knowledge of the principal human activities, each within its general physical background, and of the location of the areas concerned in the questions attempted.

Each continental area offers the possibility of a variety of methods of study, but, in general, the emphasis will be placed on an approach through 'topics' chosen to illustrate varieties of farming, fishing, forestry, the industrial and power resources, the big cities and ports, the lines of communication which have aided the development of the country, and the way of life of the peoples.

Regions

1. Western Europe (excluding British Isles), to include Norway, Sweden, Denmark, Western Germany, Switzerland, Holland, Belgium, Luxembourg, France, Italy, Iberia.
2. North America, to include U.S.A., Canada and West Indies.
3. Southern Continents, to include Argentina, Brazil, Venezuela, The Nile Valley, West Africa (Ghana and Nigeria), East Africa (Kenya, Uganda, Tanganyika, Malawi, Zambia, Southern Rhodesia), Republic of South Africa, Australia, New Zealand.
4. U.S.S.R.
5. Monsoon Asia, to include India, Pakistan, Ceylon, China, Japan.

SPECIAL NOTE

Field Work

Although Field Work has not been included in the examination syllabus for 1966, it will become an integral part of the syllabus and examination in 1967. This preliminary notice is given to enable teachers to commence planning well ahead of the examination.

SYLLABUSES—HISTORY

- Three syllabuses are offered. In each syllabus, the examination will consist of:
- (a) a written paper of 2 hours' duration,
 - (b) assessment by the teacher (subject to moderation by the Board) of course work done by the candidate over not less than one year and not more than two years prior to the examination,
 - (c) an oral examination conducted by an external examiner (with the teacher present if desired) based on the course work submitted.

SYLLABUS A

BRITISH HISTORY 1760 ONWARDS

Candidates will be able to satisfy the examiners if they study any two consecutive periods of those listed below, or any four topics from each period.

1. 1760–1830

- (a) Government. George III, his ministers and parliaments; the movement for parliamentary reform.
- (b) The work and careers of important people such as Pitt, Castlereagh, Canning and Peel.
- (c) Domestic Policy 1783–1830.
- (d) Changes in agriculture, industry and transport 1760–1830.
- (e) American Independence. Canada and India 1760–1830.
- (f) The wars against the French Revolution and Napoleon.

2. 1830–1914

- (a) Government. Parliamentary and Local Government reform.
- (b) The work and careers of important people such as Peel, Palmerston, Gladstone, Disraeli and Joseph Chamberlain.
- (c) Political movements. Development of political parties. Chartism. The Anti-Corn Law League. Trade Unionism.
- (d) Social reform. Humanitarianism. Conditions in industry. Care of the sick and poor. Developments in education.
- (e) Development of India and the Dominions.
- (f) Relations between Britain and Europe 1890–1914.

3. 1914 to the Present Day

- (a) Britain and the course of the war 1914–1918. The settlement.
- (b) Economic development 1914–1939. The Great Depression and its consequences.
- (c) Britain and the Second World War.
- (d) The Welfare State.
- (e) The end of the Empire.
- (f) Britain and the Cold War.

SYLLABUS B

SOCIAL AND ECONOMIC HISTORY c. 1760–1960

Population

18th century; growth and changes in distribution; problems arising from sources (e.g. parish registers). 19th and 20th century growth and distribution.

Agriculture

18th century changes; enclosure; improved methods of farming; work of Tull, Townshend, Coke, Bakewell and Young; social consequences; Speenhamland. 19th century; situation during Napoleonic Wars; Corn Laws, effects; period to repeal (e.g. Anti-Corn Law League); Golden Age; Depression; readjustment to First World War. 20th century; new techniques; effects of war; e.g. Government policy; inter-war period; effects of Second World War.

Industry

Domestic System; textile industry; effects of inventions; the emergence of the factory system; changes in iron and coal industries; the pottery industry; power, e.g. water, steam. 19th century; further development of 18th century industries and new industries, e.g. steel and shipbuilding. 20th century; rise of new industries, e.g. cars, aeroplanes, radio, television, man-made fibres.

N.B. Importance of inventions to be stressed.

Trade and Transport

18th to 20th centuries. Reasons for improvements in transport (canals, roads, rivers); engineers and inventors; the importance of trade to Britain; the Railway Age; the Motor Age; Air Transport; communications, e.g. the Postal Service, Telegraph, Wireless, T.V. satellite. Rise of Free Trade and its decline.

Social Changes

Factory reforms; Public Health; e.g. housing, life of the community; education; insurance, pensions (Liberal reforms 1906–1914); measures leading to Welfare State.

Working Class Movements

Trade Unions: Emergence and growth; 18th century development; combination laws; unions for skilled and unskilled; problems in late 19th century and early 20th century; e.g. struggles with the law; inter-war period including general strike; trade unions today.

Co-operative Movement: Chartists; Rise of Labour Party.

SYLLABUS C

THE CONTEMPORARY WORLD—1919 TO THE PRESENT DAY

The rise of Soviet Russia.

The Versailles Settlement and the League of Nations; the nationalist revolutions of the Middle East; economic development and social change in Britain; the recognition of Dominion Status; the rise of Mussolini.

The Great Depression; the 'New Deal' in the United States; Post-war Germany and the rise of Hitler.

The rise of the Kuomintang in China; the development of Japan; the Sino-Japanese War.

The Second World War and its aftermath; the United Nations; Britain in the post-war World; the Middle East; the 'Cold War'; the policies of the United States and Soviet Russia.

The Chinese Communist Revolution; the Korean War; the colonial revolution in South-East Asia; creation of India and Pakistan.

The colonial revolution in Africa; South Africa; world problems of peace, population and underdevelopment.

SYLLABUS—ELEMENTS OF ECONOMICS

Aims

The examination in this subject will test the candidate's understanding of the elements of that part of his environment which is concerned with the production and distribution of goods and services. It is believed that the teaching of economic principles isolated from everyday life is of little value to the pupils who are likely to follow this course, and that one justification for including this subject in a general curriculum is the extent to which it adequately prepares pupils for entry into the adult world of earning and living. Consequently this syllabus aims at presenting economics as an interpretation of the various roles in which the pupils are likely to find themselves. It must be stressed that candidates will not be expected to cover economic theory in the course, although some theory

might be presented when felt necessary to give further understanding and when ability suggests that it will be understood easily.

This syllabus is detailed by intention, to help teachers. It is hoped that the complete syllabus will be covered and that teachers will resist the tendency to prefer depth to complete coverage, for the merit of the syllabus and examination proposed is in the comprehensiveness of its treatment of this one aspect of man's existence.

It is understood that it is difficult to devote more than a small amount of time and energy to detailed local studies. But it is expected that pupils following the course will be kept in intimate contact with the local, national and international scene through whatever method the teacher finds appropriate.

Evidence that this contact has been encouraged will be expected in the examination. Entrants *may* submit a special project carried out during the course. This project will be examined *orally* prior to the written paper, and will receive 25% of the marks in lieu of a specified section of the paper.

Scheme of Examination

The written paper will be divided into *four* sections. All candidates will attempt Sections A, B and C. Those submitting a project will present a brief outline of the contents of the project by the middle of the Spring Term prior to the examination, and the pupil will be examined orally on *the contents of the project only* in the second part of the Spring Term. For these candidates the written paper will be 2 hours. Those *not* submitting a project must answer Section D of the written paper and a further $\frac{1}{2}$ hour will be allowed.

Section A (Time—40 minutes: 25% of marks)

Questions on the whole syllabus will be asked, requiring one-word, one-sentence or short-paragraph answers. Candidates will be required to answer all the questions in this section.

Section B (Time—50 minutes: 25% of marks)

A short, elementary passage on an economic topic will be given, and pupils will answer questions framed to discover if they have comprehended its facts and ideas. Comprehension of charts, diagrams or maps may also be tested as an alternative to a written passage.

Section C (Time—30 minutes: 25% of marks)

Candidates will be required to write two short essays from a number of topics taken from the whole syllabus and designed to test the pupil's comprehension of elementary economic information and concepts. The titles will not be worded in a way which requires the presentation of an economic argument or case.

Section D (in lieu of the project) (Time—30 minutes: 25% of marks)

Candidates will be required to write one essay from a list of subjects relating to contemporary economic affairs and on local, national or international studies covered in the course.

In Sections C and D credit will be given for the presentation of relevant charts and diagrams.

SYLLABUS

ELEMENTS OF ECONOMICS

A survey of the world of production and distribution of goods and services.

A. *Men as Workers*

1. POPULATION

- (i) Size, sex, age, and present trends, including world problems.
- (ii) Geographical distribution in Great Britain.
- (iii) Industrial distribution in Great Britain.

2. INDUSTRY

- (i) *Production*:
 - (a) Factors and their individual characteristics, including the importance of the division of labour.
 - (b) Elementary consideration of factor earnings—wages, interest, rents, profits.
 - (c) Size of firms (advantages and disadvantages of small and large firms).
 - (d) Forms of business organisation (private, public and co-operative).
- (ii) *Location*: factors causing location, with examples.
- (iii) *Industrial organisation*:
 - (a) The tendency towards monopoly.
 - (b) The control of monopoly.
- (iv) *The labour market*:
 - (a) Mobility of labour.
 - (b) Role of Labour Exchanges and other government agencies.
 - (c) The work of trades unions and employers' federations.

B. *Men as Consumers*

- (i) *Elementary introduction to supply, demand and the determination of prices.*
- (ii) *Distribution*:
 - (a) Wholesaling.
 - (b) Retail outlets.
 - (c) Recent developments in retailing (e.g. self-service, trading stamps, hire purchase).
 - (d) Consumer protection.
- (iii) *Money and Banking*:
 - (a) Functions of money; its value; retail prices index.
 - (b) Financial institutions:
 - Commercial banks.
 - Bank of England.
 - Institutions of the capital market (e.g. Stock Exchange, Building Societies, etc.).

C. *Men as Citizens*

1. IN THE NATION

- (i) *Public Finance*:
 - (a) Local government income and expenditure.
 - (b) Central government income and expenditure, including the importance of various forms (e.g. kinds of taxes and their effects).
- (ii) *National Income*:
 - (a) Its size and distribution.
 - (b) Economic growth.

2. IN THE WORLD

- (i) The value of international trade.
- (ii) Protection (the nature and role of tariffs).
- (iii) The balance of trade and the balance of payments; the terms of trade.
- (iv) Under-developed countries: their characteristics, and the significance of foreign aid to the provider and the recipient.

SYLLABUS—SOCIAL STUDIES

There will be two papers, each of 2 hours' duration.

Paper 1 will consist of two sections, one containing a number of compulsory questions requiring short answers and the other containing a choice of questions requiring more extended answers.

Paper 2 will consist of a choice of questions of a more searching nature.

Although the syllabus overlaps to some extent with other subjects, such as History, Geography and Economics, the examination will be primarily concerned to test knowledge of their social implications and consequences.

Introduction

An outline of the position rights and duties of the citizen. His responsibilities in local and central government; his benefits from the social services; his relationship to social institutions; his opportunities for service to the community.

An appreciation of the social aspects of life and work in the twentieth century in Britain and her international role in the changing world.

Section A—Citizenship and Government

1. Rights and duties of Citizens
Social and political rights and duties under Common Law. Judiciary. Police and Courts procedure.
2. Central Government
Functions of Monarchy, House of Lords, General Elections, Parliament, Prime Minister, Cabinet, Opposition, Shadow Cabinet, Private Members, Civil Service. Importance of Planning Departments.
3. Local Government
Principal types of local authority. Electoral system. Internal organisation and functions of Local Government Finance, Planning Departments. Relationship between Central and Local Government.

Section B—Aspects of British Life in the Twentieth Century

1. Family Life and Problems
Childhood, adolescence, family relationships, growing independence; leaving home and facing life. Personal values.
2. Home-making
Engagement and marriage. Living with in-laws. Buying or renting a home. Hire Purchase. Balancing the budget. Methods of saving. Bringing up a family. Retirement and the problems of old age.
3. Education
The first six years. Nursery and Primary Schools, Secondary Schools, Special Schools and Remedial Clinics. Vocational Training and Further

Education. Impact of mass media. Public Libraries. 1944 Act. Function of Education Officer.

4. Leisure Activities

Youth Clubs, Community Centres, Youth Hostels, Outward Bound and Duke of Edinburgh Award Schemes, creative hobbies. Rewards of voluntary social service.

5. The Welfare State

Public facilities for employment, housing, health, insurance, pensions and National Assistance. Citizens' Advice Marriage Guidance Bureaux.

6. Communications (Social Effects)

(a) Road Transport. Traffic problems, surveys and research, road accident figures. New Towns and Road Planning, Channel Tunnel, foreign travel. Functions of A.A., R.A.C., Police.

(b) Rail Transport; passenger and freight systems, reorganisation and co-ordination. Monorail systems.

(c) Sea Transport; passenger and merchant shipping, development of atomic-powered vessels, hovercraft.

(d) Functions of Post Office, telephone, cablegram and radio-telephone. Satellites.

(e) Air Transport: national and international air routes, supersonic travel.

Section C—Earning a Living

1. From School to Employment

Leaving school, obtaining employment, Youth Employment Officer, the world of Commerce and Industry.

2. Industrial and Commercial Relations

Management. Working with others, Trade Union Movement, Factory Acts and legislation. Skilled and unskilled labour, nationalised industries, population and mobility of labour force. Full employment, unemployment; social effects of technical progress and automation.

Section D—Britain and the World

1. Foreign Relations

Foreign travel, international trade and balance of payments, European trading systems, the changing Commonwealth, developed and under-developed countries.

2. Emigration and Immigration

Social and economic effects of emigration and immigration; the colour problem.

3. Machinery for Peace and Plenty

Balance of power and causes of war. The nuclear deterrent, United Nations and associated institutions and organisations.

It is assumed that, where appropriate, candidates will refer in their answers to conducted visits and educational journeys that they may have undertaken. Questions will sometimes be set so that candidates may give accounts of practical work and surveys which they have undertaken. Candidates may also submit records of practical work. Whether practical work is submitted or not, examiners will assume that at least three visits will have been made during the two years prior to the examination.

SECTION 6—ARITHMETIC, MATHEMATICS AND FURTHER MATHEMATICS

SYLLABUS—ARITHMETIC

The examination will comprise one paper of 2 hours' duration. Part I will carry 20% of the marks and Part II 80% of the marks.

Part I will consist of short questions which test basic processes.

Part II will contain questions graded according to difficulty. Optional questions, for technical and commercial candidates, will be included.

Extracts of Compound Interest tables relevant to the questions will be provided.

Four Rules of Number. Weight, measure and money, including metric units.
Index Notation.

Decimal and vulgar fractions. Percentages.

Decimalisation of quantities.

Limits of accuracy approximations.

Simple averages.

Percentage increase and decrease. Simple Interest; Compound Interest limited to 3 years. Profit and Loss calculated on either the C.P. or the S.P.

Ratio and proportion, including proportional division.

Conversion of units, British and Metric, in weights, measure and money.

Areas and perimeters. Calculations involving the triangle, the parallelogram, the trapezium, the circle and the annulus.

Volumes and surface areas of right prisms of the following cross-sections: triangle, square, rectangle and circle.

Civic and Household Arithmetic. Rates, taxes, hire purchase, stocks and shares. House purchase and insurance. Household calculations.

Interpretation of a given graph.

Use of tables and square roots.

SYLLABUSES—MATHEMATICS AND FURTHER MATHEMATICS

There will be five examination subjects:

- (1) MATHEMATICS
- (2) FURTHER MATHEMATICS (GENERAL)
- (3) FURTHER MATHEMATICS (MODERN)
- (4) FURTHER MATHEMATICS (STATISTICS)
- (5) FURTHER MATHEMATICS (STATICS AND DYNAMICS)

Candidates entering for subject (1) MATHEMATICS will be required to take one paper of 2 hours.

Candidates entering for FURTHER MATHEMATICS may opt for one or more of the subjects (2)–(5) and will take:

- (i) the paper set for subject (1) Mathematics,
- (ii) the paper(s) set on the selected subject(s).

Candidates must satisfy the examiners in each paper.

In all papers, unless specific instructions to the contrary are given:

- (a) Candidates may use any appropriate method to answer questions.
- (b) Any standard set of four-figure tables may be used and a set of these should be provided by schools for sole use in examinations.
- (c) Slide rules may be used where appropriate. Candidates should indicate where they have used slide rules by writing (S.R.) after their answer.
- (d) Set squares, graduated rules, diagonal scales, protractors and compasses may be used.
- (e) Desk calculators may *not* be used at present.

SYLLABUS—MATHEMATICS

There will be one paper of 2 hours, consisting of two sections:

Section A, to which 60% of the marks will be allocated, will consist of short questions covering the whole syllabus.

Section B, to which 40% of the marks will be allocated, will consist of more searching questions.

Formal proofs of mathematical concepts will *not* be required.

(*Note*: This paper must also be taken by candidates entered for Further Mathematics (General), Further Mathematics (Modern), Further Mathematics (Statistics) and Further Mathematics (Statics and Dynamics) in addition to their specialist paper.)

Four Rules of Number. Weight, measure and money, including the metric system.

Decimal and vulgar fractions, including the use of brackets and approximation to a given number of significant figures.

Simple averages.

Percentages. Simple Interest, including simple inverse problems.

Ratio and proportion, including proportional division.

Mensuration of triangle, circle, parallelogram and trapezium.

Volumes and surface areas of right prisms of the following cross-sections: circle, triangle, parallelogram and trapezium.

Interpretation of simple graphs. Plotting from given data and with given scales. Graphs to include straight lines, lines of 'best fit' by trial, travel graphs and simple curves.

Properties of angles.

Construction of triangles and quadrilaterals from given data.

Congruency. The four cases involving only numerical examples.

Properties of isosceles and equilateral triangles, and parallelograms.

Areas of triangles and parallelograms.
 Angles of regular polygons.
 Properties of angles of the circle, including cyclic quadrilateral.
 Properties of tangents from a point to a circle.
 Properties of chords including the perpendicular bisector of a chord and equal chords.
 Symmetry of plane figures.
 Use of algebraic notation. Directed numbers.
 Substitution.
 Equations of the first degree in one unknown, including fractional equations.
 Brackets.
 Standard expansions $(a + b)^2$, $(a - b)^2$, $(a + b)(a - b)$.
 Factors. Common, by grouping, difference of two squares, perfect squares, trinomials (coefficients of x^2 to be prime numbers).
 Indices. Simple laws involving the negative and positive integral indices and to include zero.
 Logarithms. Easy multiplication and division.
 Right-angled triangles. Solution by Pythagoras' theorem and by trigonometry using *sine*, *cosine* and *tangent*. Bearings.
 Simultaneous equations in two unknowns and simple problems thereon.
 Quadratic equations. Solutions by factors only.

SYLLABUS—FURTHER MATHEMATICS (GENERAL)

Candidates must take two papers:

Paper I, which will be the paper set for the subject MATHEMATICS.

Paper II—FURTHER MATHEMATICS (GENERAL) on the syllabus set out below.

Paper II will be of 2 hours' duration and will consist of two sections:

Section A, to which 60% of the marks will be allocated, will contain short questions covering the whole syllabus;

Section B, to which 40% of the marks will be allocated, will contain more searching questions.

Candidates must satisfy the examiners in both papers.

Formal proofs of mathematical concepts will *not* be required.

Specified formulae will be given.

A knowledge of the syllabus for Paper I—MATHEMATICS will be assumed.

Profit and loss problems.

Weighted averages. Compound proportion.

Compound Interest.

Surface areas and volumes of right pyramids and cones, and of spheres. (Formulae will be given.)

Area of sector and length of arc.

Fractional expressions and equations.

Simultaneous equations, including simple problems with two unknowns and fractional coefficients.

Quadratic equations, including simple problems.

Indices, to include fractional indices.

Logarithms. Evaluation of powers and roots.

Recognition of series, and supplying missing terms.

Construction, use and transposition of formulae.

Co-ordinates. Graphs of the following algebraic functions:

(i) $y = mx + c$; interpretation of gradient and intercept,

(ii) $y = ax^2 + bx + c$; its interpretation.

Estimation of a gradient at a point by drawing. Graphical solution of simultaneous equations (linear and quadratic).

Angles in alternate segments.

Applications of similarity, including the areas and volumes of similar figures.

Scale and simple map figures.

Loci. Solution of problems requiring a knowledge of the basic constructions.

Trigonometry. Harder problems involving right-angled triangles in two dimensions. Area of triangle, where angle is acute, using the formulae $\frac{1}{2}bc \sin A$ and the semi-perimeter formula, $\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}$. Latitude and longitude; problems will be restricted to parallels of latitudes and meridians. Properties of 30° , 60° , 90° triangle and 45° , 45° , 90° triangle and knowledge of simple surds involved.

SYLLABUS—FURTHER MATHEMATICS (MODERN)

Candidates must take TWO papers:

Paper I, which will be the paper set for the subject MATHEMATICS.

Paper II—FURTHER MATHEMATICS (MODERN) on the syllabus set out below.

Paper II will be of 2 hours' duration and a wide choice of questions will be allowed.

Candidates must satisfy the examiners in both papers.

1. The Theory of Sets. This will be limited to a knowledge of:

- (a) the idea of a set as a number of elements,
- (b) subsets,
- (c) the empty set and the universal set,
- (d) the complement of a set,
- (e) the union and intersection of sets,
- (f) Venn diagrams and their use in solving problems,
- (g) functions as a mapping.

It is suggested that the following symbols be used:

$\{ \dots \}$ to indicate the composition of a set.

\in is a member of.

\notin is not a member of.

\subset is contained in, i.e. subset.

\cup union of.

\cap intersection of.

\sim or ' complement of.

\emptyset or 0 the empty set.

I or μ the universal set.

2. (a) The idea of a group.
 (b) Commutative and non-commutative groups.
 (c) The identity and inverse members of a group.
 (d) Closure.
3. Matrices. These will be limited to 2×2 .
 (a) Addition.
 (b) Multiplication by a scalar.
 (c) Multiplication.
 (d) Unit matrix.
 (e) Inverse of a non-singular matrix.
 (f) The application of matrices in the solution of simultaneous equations and to linear transformations.
 (g) Practical problems involving use of matrices.
4. (a) Numerical work in bases other than the denary.
 (b) Modulo Arithmetic.
5. Linear programming—graphical treatment.
6. Movement Geometry. The effect of:
 (a) translation,
 (b) reflection in a given line,
 (c) rotation about a given point, on a point or line or plane figure; combinations of transformations.
 Questions may be set involving use of vectors.
7. Topology; the ideas of two-dimensional topological space (i.e. inside, outside, region, boundary, paths, continuity). The properties of closed networks; travelling a network. Relationships between regions, arcs and vertices.

SYLLABUS—FURTHER MATHEMATICS (STATISTICS)

Candidates must take TWO papers:

Paper I, which will be the paper set for the subject MATHEMATICS.

Paper II—FURTHER MATHEMATICS (STATISTICS).

Paper II will be of 2 hours' duration and will consist of ten questions, from which candidates will be required to choose six.

Candidates may use coloured pencils to clarify their work but should not waste time in elaborating diagrams unnecessarily.

Candidates must satisfy the examiners in both papers.

Collection of Data:

Methods to be used. Degree of accuracy. Questionnaires. Sampling. Bias.

Presentation of Data:

Tabulation: grouped and ungrouped data. Frequency distributions. Cumulative frequency distributions.

Illustration:

Bar diagrams, pie-charts, histograms (equal and unequal class intervals), frequency polygons, frequency curves, cumulative frequency graph, pictograms.

Measures of Central Tendency:

Ungrouped Data: evaluation of mean, median, mode.
Grouped Data: modal class, estimation of mode from histogram.
Median from cumulative frequency graph (ogive).
Mean by calculation. Use of working mean (arbitrary constant).
Measures of Dispersion: variance, standard deviation.

Correlation:

Scatter diagrams—regression lines (lines of best fit by trial only). Calculation of rank correlation coefficient.

Time-Series:

Plotting of graph from given data. Calculation of moving average and the smoothing effect of a moving average graph superimposed. Interpretation of the graphs.

Weighted Averages:

To include Index Numbers, standardised Death Rates (standard distribution to be supplied).

Formulae:

Ungrouped Data (a set of numbers):

$$\text{Standard Deviation} = \sqrt{\text{variance}} = \sqrt{\frac{\sum d^2}{n}}$$

where $\sum d^2$ = Sum of (deviation from True Mean)².

n = Total number of items.

Grouped Data (Frequency distributions):

$$\text{Mean} = M_w + \frac{\sum fd}{f}$$

$$\text{Variance} = \frac{\sum fd^2}{\sum f} - \frac{(\sum fd)^2}{(\sum f)^2}$$

where M_w = Working Mean or Guessed Mean or Arbitrary Constant.

$\sum fd$ = Sum of (the products of frequency and deviation from M_w).

$\sum f$ = Sum of the frequencies (i.e. total no. of items).

$\sum fd^2$ = Sum of (the products of frequency and the square of deviation from M_w).

Coefficient of Rank Correlation:

$$\text{Coeff. of Rank Corr.} = 1 - \frac{6 \sum d^2}{n(n^2 - 1)}$$

where $\sum d^2$ = Sum of (difference in ranks)².

n = Total number of items.

SYLLABUS—FURTHER MATHEMATICS (STATICS AND DYNAMICS)

Candidates must take two papers:

Paper I, which will be the paper set for the subject MATHEMATICS.

Paper II—FURTHER MATHEMATICS (STATICS AND DYNAMICS).

Paper II will be of 2 hours' duration and will contain ten questions, from which candidates will be required to choose six. It will test a knowledge of basic principles and calculations will be of a simple nature. Solutions by accurate scale drawing will be accepted.

Candidates must satisfy the examiners in both papers.

The distinction between scalar and vector quantities—e.g. distance travelled and displacement, speed and velocity, etc.

Space-time diagram. Average speed. Speed at an instant.

Velocity-time diagram. Average acceleration. Acceleration at an instant. Distance travelled.

The equations of uniformly accelerated motion in a straight line. Motion on an inclined plane. Vertical motion under gravity.

Mass and weight.

Force—measured in absolute and gravitational units.

Newton's first and second laws of motion, leading to the relation between force and acceleration.

Conservation of momentum. Impulse.

Work, Energy, Power. Conservation of Energy.

The composition of vectors.

The resolution of vectors into components at right angles.

Navigational problems.

Moments of forces.

Resultant of parallel forces. Newton's third law. Loaded beams.

Centre of Gravity of uniform rod, triangular, rectangular and circular laminae and simple combinations of these.

Equilibrium of a body under the action of three coplanar forces.

Friction. Horizontal and inclined planes.

SECTION 7—MODERN LANGUAGES

SYLLABUS—FRENCH

The standard envisaged will be that of the average pupil who has completed a five-year course of secondary education. The examination will therefore call for:

- (a) adequate comprehension of a given list of everyday topics which can form the basis of oral, written and aural tests;
- (b) ability to pronounce clearly, read intelligently and produce simple replies in conversation on a selection of the given topics;
- (c) an elementary knowledge of the history, geography and culture of France.

Essentially, the aim is a practical approach to language learning which will enable candidates to feel that they have achieved some appreciation of the language and the country they have been studying. Basically, the examination will encourage candidates to show what they know rather than emphasise their deficiencies by excess of grammatical enigmas and 'catch' questions.

There will be an oral test and two written papers.

1. **Oral Test.** 10–15 minutes with an examiner. (40 marks)

- (a) Prepared reading or recitation of a passage of the candidate's own choice. (5 marks)
- (b) Unprepared reading. (5 marks)
- (c) Conversation: comprehension questions on (b) and general questions on the topics listed in the syllabus and, at the option of the school, on any project work or pictures relating to these topics. (30 marks)

2. **Paper I.** 2 hours. (45 marks)

Instructions to the candidates will be in English. Candidates will be instructed to answer the questions in the order set.

- (a) *Comprehension.* A printed passage in French, followed by graded questions set and answered in French. These will lead to further general questions on the listed topics. (15 marks)
- (b) *Free composition.* A choice of eight subjects, which will include a letter, a series of pictures and a story from outline. Candidates will opt to write *either* one composition of 120 words *or* two compositions of 60 words. (15 marks)
- (c) *Version.* (5 marks)
- (d) *General questions* about France, set and answered in English. From a choice of fifteen questions, candidates will be required to write five short

answers and one at greater length. A map of France may be included. (10 marks)

3. **Paper II.** 1 hour. (15 marks)

(a) *Dictation.* (5 marks)

(b) *Aural.* The passage will be read in French and questions set and answered in English. (10 marks)

TOPICS

Practical, everyday vocabulary in connection with the following topics:

1. Shops. Weights and measures. Numbers.
2. Restaurant.
3. School.
4. Countries. Travel (home and abroad).
5. Towns. Directions.
6. Clothes. Colours.
7. House. Family. Garden.
8. Hobbies. Sports. Cinema. Television. Theatre.
9. Countryside. Farm. Seaside. Weather.
10. Body. Health.
11. Dates. Seasons. Festivals. Birthdays. Time.
12. Careers. Occupations.

SYLLABUS

Articles

Use of the definite and indefinite, dative, genitive and partitive, including exceptions with *de*.

Nouns

Common, regular and irregular nouns.

Adjectives

1. Common adjectives and their position.
2. Possessives.
3. Demonstratives.
4. Interrogative.
5. Comparative and superlative.
6. Numerals: cardinals and ordinals.

Pronouns

1. Disjunctives: for emphasis, after prepositions, after *c'est*, in commands, in comparison.
2. Direct and indirect object.
3. *Y, en*.
4. Demonstratives.
5. Possessives.
6. Relatives.
7. Interrogatives.

Verbs—including reflexives

All persons, including *on*.

Affirmative, negative, interrogative, interrogative negative.

Imperative, affirmative and negative.

Tenses: Present.

Future; also *aller* and infinitive.

Imperfect.

Perfect and pluperfect, with *avoir* and *être*, including the rules of agreement.

Past Historic should be learned and recognised.

Conditional

Infinitive.

Participles, present and past.

Adverbs

Position.

Formation of common adverbs.

Adverbs of negation.

Prepositions

Conjunctions

Interjections

Candidates will be expected to have a working knowledge of common idiomatic expressions.

SYLLABUS—GERMAN

The standard envisaged will be that of the average pupil who has completed a five-year course of secondary education. The examination will therefore call for:

- (a) adequate comprehension of a given list of everyday topics which can form the basis of written, oral and aural tests;
- (b) ability to pronounce clearly, read intelligently and produce simple replies in conversation on a selection of the given topics;
- (c) an elementary knowledge of the history, geography and culture of Germany.

Essentially, the aim is a practical approach to language learning which will enable candidates to feel that they have achieved some appreciation of the language and the country they have been studying. Basically, the examination will encourage candidates to show what they know rather than emphasise their deficiencies by excess of grammatical enigmas and 'catch' questions.

The examination will consist of an Oral and Aural Test and one Written Paper.

1. The Oral and Aural Test

- (a) A passage will be read to the candidates in German by the teacher. Questions on it will be asked orally in English and candidates will write their answers in English. (10 marks)

- (b) Each candidate will have ten to fifteen minutes each with an external examiner. During the course of this he will:
- (i) read aloud or recite a prepared passage of his own choice, (5 marks)
 - (ii) read an unprepared passage provided by the examiner, the candidate being allowed two or three minutes to familiarise himself with the passage before reading it, (10 marks)
 - (iii) converse with the examiner in German on the unprepared passage just read and the topics listed in the syllabus. (Subjects that could also be discussed at the option of the school—project books and pictures relating to the list of topics in the syllabus.) (25 marks)

2. Written Paper (2 hours)

- (a) *Comprehension* test of a printed passage. Graded questions will be set; these questions will lead to further general questions on the listed topics. All questions will be set and answered in German. (20 marks)
- (b) *Free composition* in German. A wide choice of about eight subjects will be given, including a letter and a dialogue. Candidates may choose *either* two of the set titles, writing about 60 words on each, *or* only one, writing about 120 words. (20 marks)
- (c) *Summary* in English of a short passage in German. (10 marks)

SYLLABUS

Although it is considered that in most cases Grammar should not be taught as such, an analysis of what might reasonably be expected to be covered may be helpful to the teacher. This analysis should be read in conjunction with the foreword to the syllabus.

Vocabulary

The vocabulary should be that required to deal with everyday experiences in a German-speaking country.

Nouns

Declension in singular and plural.

Adjectives

Declension, comparison, possessive, demonstrative and interrogative.

Pronouns

Personal, interrogative, relative.

Use of Cases

Subject, Complement, Direct Object, Indirect Object, Genitive, after prepositions, and in the commoner idioms.

Verbs

Conjugation of the present, future, perfect, imperfect, and pluperfect indicative tenses in the active voice. The imperative mood. Present, perfect and imperfect of modal auxiliary verbs. Separable and inseparable prefixes. Reflexive verbs. Infinitive constructions. (The subjunctive mood or passive voice and conditional will not be specifically tested; *ich möchte* could be taught as a set phrase.)

Numerals

Cardinal and ordinal, time, dates, etc.

Punctuation

Especially where it differs from English. Use of capital and small letters.

Word-Order

Conjunctions

TOPICS

1. Family, house and garden.
2. School.
3. Body, health, clothes.
4. Hobbies, sports and recreation.
5. Towns. Directions, shopping, restaurants and cafés.
6. Means of transport, countries, travel.
7. Countryside, seaside.
8. Weather, seasons, dates, time, festivals, birthdays.
9. Careers and occupations.

SYLLABUS—SPANISH

The standard envisaged for all subjects will be that of the average pupil who has completed a five-year course of secondary education. The examination will therefore call for:

- (a) adequate comprehension of a given list of everyday topics which can form the basis of written, oral and aural tests;
- (b) ability to pronounce clearly, read intelligently and produce simple replies in conversation on a selection of the given topics;
- (c) an elementary knowledge of the history, geography and culture of the country concerned.

Essentially the aim is a practical approach to language learning which will enable candidates to feel that they have achieved some appreciation of the language and the country they have been studying. Basically, the examination will encourage candidates to show what they know rather than emphasise their deficiencies by excess of grammatical enigmas and 'catch' questions.

The examination will consist of an Oral and Aural Test and one Written Paper.

1. Oral and Aural Test

- (a) A passage will be read in Spanish. The questions will be asked orally in English and candidates will write their answers in English. (10 marks)
- (b) Candidates will have 10–15 minutes each with an examiner.
 - (i) Prepared reading or recitation of a passage of the candidate's choice. (5 marks)
 - (ii) Unprepared reading of a passage provided by the examiner. (10 marks)
 - (iii) Conversation to test comprehension of the unprepared passage, general questions on the topics listed in the syllabus, or, at the option of the school, on any project work or pictures relating to these topics. (25 marks)

2. Written Paper

Instructions will be given in English.

- (a) *Comprehension* test of a printed passage. Graded questions will be set and answered in Spanish. These questions will lead to questions of a more general nature on the listed topics. (20 marks)
- (b) *Free composition* in Spanish. A choice of about eight subjects will be given, including a letter, a dialogue, a series of pictures and an outline story. Candidates may choose *either* two of the set titles, writing about 60 words on each *or* only one, writing about 120 words on it. (20 marks)
- (c) Short simple passage in Spanish to be *summarised* in English in the candidate's own words. (10 marks)

SYLLABUS

Although it is considered that in most cases Grammar should not be taught as such, an analysis of what might reasonably be expected to be covered may be helpful to the teacher. This analysis should be read in conjunction with the foreword to the syllabus.

Vocabulary

The vocabulary should be that required to deal with everyday experiences in a Spanish-speaking country.

Nouns

Singular and plural.

Adjectives

Singular and plural, comparison, possessive, demonstrative and interrogative.

Pronouns

Personal, interrogative, relative.

Verbs

Pupils should know all forms of address (*tu, vosotros/as, Vd., Vds.*)

- (a) *Tenses*: Present tenses

Imperfect and Preterite

Future and Conditional

Perfect and Pluperfect

Imperative

- (b) It is advisable that candidates should be able to recognise Present and Imperfect Subjunctive forms.
- (c) Candidates will be required to know the use of reflexive constructions to correspond to the use of the Passive in English.
- (d) Candidates will also be expected to know common impersonal verbs, e.g. *gustar*.

Punctuation

Especially where it differs from English. Use of capital and small letters.

Other Points

- (a) In Direct and Indirect Object Pronouns, the use of *se*.
- (b) The use of the personal *a*.
- (c) The apocopation of adjectives.

TOPICS

1. Family, house and garden.
2. School.
3. Body, health, clothes.
4. Hobbies, sports and recreation.
5. Towns. Directions, shopping, restaurants and cafés.
6. Means of transport, countries, travel.
7. Countryside, seaside.
8. Weather, seasons, dates, time, festivals, birthdays.
9. Careers and occupations.

SECTION 8—MUSIC

SYLLABUS—MUSIC

SCOPE OF THE EXAMINATIONS

The emphasis will be placed upon the fact that a candidate will have completed a five-year course in Music.

The examination has been designed to test musicianship and not merely the memorisation of facts.

The examination will consist of the following sections :

- (a) *Practical*: performing.
- (b) *Aural*: listening and recording what has been heard.
- (c) *Theory*: understanding and creating.
- (d) *History and Appreciation*: knowing and remembering.
- (e) *Special Study*: following individual interests.

Candidates must take *any four* of the five sections.

Candidates will be expected to satisfy the examiners in all four sections, but failure to do so in any one section will not necessarily mean that the candidate will not achieve a graded result.

Each section will carry 25% of the total marks.

With regard to Sections (a) and (e), teachers' assessments of the work of their candidates in the practical field will be taken into account, particularly in the case of nervous candidates.

(a) **Practical**

The practical examination will consist of the performance (either vocal or instrumental, solo, duet, trio or quartet) of a simple piece of the candidate's own choice, which may be accompanied. The weight of the marks will be given to the standard of performance rather than the difficulty of the piece, which, however, should not be lower than Grade II (Associated Board) or an equivalent standard. Any melodic instrument may be used.

Practical examinations will be conducted at schools chosen as centres for this purpose.

(b) **Aural**

The aural examination will consist of a series of questions designed to test one skill at a time. They will require written answers.

1. Rhythm dictations, in simple time, graded in difficulty. Each rhythm will be played as a melody, but candidates will be required to write down the rhythm only. The speed of the beat and the time signature will be given.

2. Melodic dictations, graded in difficulty. The rhythm of each melody and the key signature will be given.
3. Dictation of rhythm and melody combined. The speed of the beat and the tonic chord will be given.
4. Cadences. A short piece will be played, and candidates will be required to write the name of the cadence at the end of each phrase.
5. Signs and Terms. On the candidate's answer paper will be printed a melody. From dictation the candidate will be asked to insert one or more of the following: speed indication, dynamics, phrase marks.
6. Candidates will listen to an extract from work which they have not studied, and may be required to answer questions on its period, style, instrumentation, etc.

The questions requiring musical dictation will be played by the teacher conducting the examination in each school, who will be supplied with detailed written instructions. In the case of Question 6, which involves playing a recorded extract from an unprepared work, the record will be sent to schools along with the instructions for the test.

(c) Theory

There will be a written examination in the theory of music.

Major and minor keys, using up to four sharps or flats. Candidates may be required to recognise and name the key of a short melody which is preceded by the key signature. The melody will end on a note of the tonic chord and will not modulate.

Notation. Notes from semiquaver to semibreve (including dotted notes) and their rests.

Time. $\frac{2}{4}$, $\frac{3}{4}$, $\frac{4}{4}$ and $\frac{6}{8}$ time.

Clefs. The treble (G) and Bass (F) clefs.

Writing a rhythm to a given set of words, prefixing the time signature.

Completing a simple melody, the opening of which is given.

Knowledge of elementary harmony, primary chords and cadences. Candidates may be required to harmonise cadences in two, three or four parts, using chords I, IV, V, or VI, in root position only.

(d) History and Appreciation

This section will consist of questions intended to test the candidates' knowledge of set works within their historical background, including knowledge of musical form and knowledge of the orchestra and individual instruments where appropriate to the works chosen. Straightforward questions will be asked, requiring written answers. Credit will be given for musical knowledge rather than for skill in essay writing. Aural recognition of themes from set works will be required, and credit will be given for musical quotations made in the course of written answers.

Three works are to be prepared, not more than one work being taken from any one of the following sections:

Section 1

J. S. Bach: Brandenburg Concerto No. 2 (last movement only).

Handel: *Messiah*, Part 1, excerpt from 'Pastoral Symphony' to 'Rejoice Greatly'.

Section 2

Mozart: Symphony No. 40 in G minor (first movement).

Beethoven: Symphony No. 3 (*Eroica*) (first movement).

Section 3

Schubert: Songs from *26 Classical Songs*, pub. Novello: 'Hark! Hark! the Lark!', 'Rose among the Heather', 'The Erl King', 'The Trout', 'To Music', and 'Whither?'

Schubert: 'Trout' Variations—4th movement of 'The Trout' Quintet.

Chopin: Polonaise in A major.

Section 4

Malcolm Arnold: Guitar Concerto.

Benjamin Britten: *Saint Nicholas*.

Section 5

Smetana: *Vltava*.

Saint Saëns: *Danse Macabre*.

Section 6

Bizet: *Carmen*, Act 2.

Gilbert and Sullivan: *The Mikado*, Finale from Act 1.

Section 7

Tchaikovsky: *Swan Lake*, Act 2.

Stravinsky: *Petrouchka*, Act 1.

Section 8 (All four to be studied as one set work.)

(i) *Snake Rag*—recorded by King Oliver (1923).

(ii) *Alexander's Ragtime Band*—recorded by Bunk Johnson.

(iii) *Backwater Blues*—recorded by Huddie Leadbetter.

(iv) *Artistry in Boogie*—recorded by Stan Kenton.

(e) Special Study

This will take the form of a Project to be presented at the Practical Examination. Candidates must be able to satisfy the Examiner that the Project is the result of sustained study and may be required to answer oral questions on the content.

The Project may take the form of:

- (1) a written study of a specific musical topic,
- or (2) a collection of the candidate's own original musical compositions or arrangements,
- or (3) the making and playing of a simple musical instrument,
- or (4) a collection of programmes of concerts, ballets, etc., which the candidate has attended, together with the candidate's own written comments on the performances.

SECTION 9—RELIGIOUS KNOWLEDGE

SYLLABUS—RELIGIOUS KNOWLEDGE

The Religious Knowledge Regional Subject Panel, which is representative of all the major denominations of the Christian Church have taken the opportunity in drawing up the syllabus to give relevancy and reality to the subject, to enhance its standing and importance in secondary schools, to relate Christian teaching to modern living, and to link the Bible with the problems of today.

Two alternative syllabuses are offered:

Syllabus A calls for a study of a representative number of men and women whom God used in Old Testament times. It is intended that they should be presented as real people confronted by situations and problems similar to our own, gaining an evergrowing knowledge of God in the disciplines of everyday life. This leads on to a study of the life and teaching of Jesus not only as presented in the Synoptic Gospels but also in carefully chosen passages from the Gospel of John and the early part of the Acts of the Apostles.

Syllabus B is more topical than chronological. The basic theme is the character of God and His purpose for man. It includes material from both the Old and the New Testament, but always related to the contemporary situation.

In addition to their main study, candidates following either syllabus will be asked to submit a special project of their own choice.

For both syllabuses there will be one 2-hour paper for which 80% of the marks will be awarded. The remaining 20% of the marks will be allocated to the course work, in connection with which an oral test may be arranged.

SYLLABUS A

RELIGIOUS KNOWLEDGE

Old Testament

The thread connecting the twelve characters chosen is the thought of these individuals as instruments of God's purposes and vehicles of His truth.

1. *Abraham*

The Call of Abraham

Abraham's generosity and faith

God's Promises renewed

Abraham's supreme act of faith and devotion

Genesis Ch. 11, v. 31; Ch. 12, vv. 1-9;

Hebrews Ch. 11, vv. 8-10.

Genesis Ch. 13, vv. 1-13.

Genesis Ch. 13, vv. 14-18.

Genesis Ch. 22, vv. 1-18;

Hebrews Ch. 11, vv. 17-19;

Romans Ch. 8, v. 32.

2. *Joseph*
 Joseph the teenager Genesis Ch. 37, vv. 1-28.
 Joseph overcomes temptation Genesis Ch. 39.
 Joseph the Prime Minister Genesis Ch. 41, vv. 38-44.
 Joseph tests his brothers Genesis Ch. 43, vv. 1-18, 26-34.
 Reconciliation Genesis Ch. 44-45, v. 15.
3. *Moses*
 Birth and upbringing Exodus Ch. 2, vv. 1-15.
 Call of Moses Exodus Ch. 3, vv. 1-14.
 Pharaoh's anger Exodus Ch. 5, vv. 1-9.
 Passover and deliverance Exodus Ch. 12, vv. 21-39;
 Exodus Ch. 13, vv. 20-22;
 Exodus Ch. 14, vv. 1-9, 13-31.
 Sinai Exodus Ch. 19, v. 1;
 Exodus Ch. 20, vv. 1-17.
 (Reference may be made to Acts Ch. 7, vv. 18-36 and Hebrews Ch. 11, vv. 23-29.)
4. *Joshua*
 Joshua, the successor of Moses Joshua Ch. 1, vv. 1-9.
 Capture of Jericho Joshua Ch. 6, vv. 1-20.
5. *Ruth. Choosing the Right Path*
 Setting the scene Ruth Ch. 1, vv. 1-5.
 At the crossroads Ruth Ch. 1, vv. 6-18.
 The Gleaner Ruth Ch. 2, vv. 1-17.
 Happy marriage Ruth Ch. 4, vv. 13-17.
6. *Samuel*
 Birth and dedication I Samuel Ch. 1, vv. 20, 27-28.
 Call of Samuel I Samuel Ch. 3, vv. 1-21.
 Message of Samuel I Samuel Ch. 7, vv. 3-12.
 Samuel the king-maker I Samuel Ch. 8, v. 6;
 I Samuel Ch. 9, vv. 15-17;
 I Samuel Ch. 10; v. 1.
7. *David*
 The Anointing of David I Samuel Ch. 16, vv. 1-13.
 David and Goliath I Samuel Ch. 17, vv. 19-52.
 David spares Saul's life I Samuel Ch. 26, vv. 5-25.
 David's failure (reference to I Kings Ch. II Samuel Ch. 11, vv. 2-5, 14-17, 22-27.
 15, v. 5)
 Nathan's rebuke and David's repentance II Samuel Ch. 12, vv. 1-14;
 Psalm 51, vv. 1-4.
8. *Elijah*
 At Cherith and Zarephath I Kings Ch. 17, vv. 1-24.
 On Mount Carmel I Kings Ch. 18, vv. 17-46.
 On Mount Horeb I Kings Ch. 19, vv. 1-18.
 Naboth's Vineyard I Kings Ch. 21, vv. 1-20.
9. *Amos*
 Amos the shepherd Amos Ch. 1, v. 1.
 The call of the prophet Amos Ch. 7, vv. 10-17.
 The message of the prophet:
 Damascus Amos Ch. 1, vv. 3-5.
 Judah Amos Ch. 2, vv. 4-5.
 Israel Amos Ch. 2, vv. 6-16.
 Children of God Amos Ch. 3, vv. 1-8.
 Cows of Bashan Amos Ch. 4, vv. 1-3.
 Hypocrisy Amos Ch. 5, vv. 21-24.
 The plumbline Amos Ch. 7, vv. 7-9.
 Summer fruit Amos Ch. 8, vv. 1-10.

10. *Hosea. The Love of God*

Gomer and Hosea

The sins of the nation condemned

Punishment

Compassion

Return to God

Hosea Ch. 1, vv. 1-9;
Hosea Ch. 3, vv. 1-3.
Hosea Ch. 6, vv. 4-11;
Hosea Ch. 8, vv. 3-8.
Hosea Ch. 10, vv. 2-10.
Hosea Ch. 11, vv. 1-11.
Hosea Ch. 14, vv. 1-9.

11. *Josiah*

A young king ready for reform

The discovery of the Book of the Law

The vow of king and people

II Kings Ch. 22, vv. 1-2.
II Kings Ch. 22, vv. 3-20;
Deuteronomy Ch. 6, vv. 4-5.
II Kings Ch. 23, vv. 1-5, 21-25.

12. *Nehemiah. With Sword and Trowel*

The appeal to the royal cupbearer

Nehemiah gets permission to go to Jerusalem

The night ride and a rallying call

A war of nerves:

(a) Mockery

(b) Violence

(c) Parley

(d) Rebellion

(e) Conspiracy

The triumph of prayer and action

Hymn of thanksgiving

Nehemiah Ch. 1, vv. 1-11.
Nehemiah Ch. 2, vv. 1-8.
Nehemiah Ch. 2, vv. 11-18.
Nehemiah Ch. 4, vv. 1-4.
Nehemiah Ch. 4, vv. 7-9, 16-23.
Nehemiah Ch. 6, vv. 2-4.
Nehemiah Ch. 6, vv. 5-8.
Nehemiah Ch. 6, vv. 10-12.
Nehemiah Ch. 6, vv. 15-16.
Psalm 95, vv. 1-6.

New Testament

1. Jesus is born

Luke Ch. 2.
Matthew Ch. 2.

2. *Preparation for the Ministry*

The forerunner

Baptism and temptation

Call of the disciples

Luke Ch. 3, vv. 1-17.
Matthew Ch. 3, vv. 13-17;
Matthew Ch. 4, vv. 1-11.
John Ch. 1, vv. 29-51;
Luke Ch. 5, vv. 1-11, 27-32;
Luke Ch. 6, vv. 13-16.

3. *Preaching and Healing in Galilee*

In the synagogue at Nazareth

The paralysed man

The man with the withered arm

The centurion's servant

The widow's son at Nain.

Luke Ch. 4, vv. 16-22, 28-32.
Mark Ch. 2, vv. 1-12.
Mark Ch. 3, vv. 1-6.
Luke Ch. 7, vv. 1-10.
Luke Ch. 7, vv. 11-16.

4. *Other Miracles of Jesus*

Water into wine

Feeding Five Thousand

Stilling the storm

John Ch. 2, vv. 1-11.
John Ch. 6, vv. 1-14.
Mark Ch. 4, vv. 35-41.

5. *Teaching of Jesus*

(a) Sermon on the Mount

Matthew Ch. 5, vv. 1-18, 43-48;
Matthew Ch. 6;
Matthew Ch. 7, vv. 24-29.

(b) Parables:

The Sower

Wheat and tares

Two debtors

Unforgiving servant

Good Samaritan

Pharisee and publican

The rich fool

The lost sheep, lost coin, lost son

Mark Ch. 4, vv. 1-20.
Matthew Ch. 13, vv. 24-30, 36-43.
Luke Ch. 7, vv. 36-50.
Matthew Ch. 18, vv. 21-35.
Luke Ch. 10, vv. 25-37.
Luke Ch. 18, vv. 9-14.
Luke Ch. 12, vv. 13-21.
Luke Ch. 15.

- | | |
|--|-------------------------------------|
| 6. 'Steadfastly to Jerusalem' | |
| Peter's confession | Matthew Ch. 16, vv. 13-23. |
| Transfiguration | Luke Ch. 9, vv. 28-36. |
| Healing the epileptic boy | Mark Ch. 9, vv. 14-29. |
| A blind man healed | Luke Ch. 18, vv. 31-43. |
| Zacchaeus | Luke Ch. 19, vv. 1-10. |
| 7. Triumphal entry | Luke Ch. 19, vv. 28-40. |
| In the Temple | Luke Ch. 19, vv. 45-48. |
| Last Supper, betrayal and arrest | Luke Ch. 22, vv. 1-23, 39-65. |
| 8. Trials before the High Priest, Pilate and Herod | Luke Ch. 22, vv. 66-71; |
| The crucifixion | Luke Ch. 23, vv. 1-25. |
| The burial | Luke Ch. 23, vv. 32-49. |
| | John Ch. 19, vv. 38-42. |
| 9. The resurrection | |
| (a) The woman at the tomb | Luke Ch. 24, vv. 1-12. |
| (b) The road to Emmaus | Luke Ch. 24, vv. 13-35. |
| (c) Thomas | John Ch. 20, vv. 24-29. |
| 10. 'Into All the World' | |
| The great commission | Matthew Ch. 28, vv. 19-20. |
| The ascension | Acts Ch. 1, vv. 1-12. |
| The coming of the Holy Spirit | Acts Ch. 2, vv. 1-14, 22-24, 36-42. |

SYLLABUS B

RELIGIOUS KNOWLEDGE

The Character of God and His Purpose for Man

This syllabus is designed to assist the pupils towards an understanding of fundamental Christian beliefs and teaching about the nature of God and His revelation of Himself to man. It should also create an awareness of the moral and spiritual demands of Christian discipleship in a modern environment.

The textual passages are given to guide the teacher in the presentation of these truths. Teaching on any topic need not be confined to the set passages. A detailed study of the passages will not be required, neither will a test of personal conviction be made.

THE CHARACTER OF GOD

God the Father

- | | |
|---|---|
| Of our Lord Jesus Christ | Ephesians Ch. 3, v. 14. |
| Of those who trust in Him because they have been born into His family | John Ch. 1, vv. 1-15;
Romans Ch. 8, vv. 14-17. |
| (i) The Creator | Genesis Ch. 1, 2, vv. 1-3; Ch. 4 endorsed by Jesus—Matthew Ch. 19, v. 4);
Isaiah Ch. 40, vv. 12-31;
Acts Ch. 17, vv. 22-28. |
| (ii) The King and Judge | Psalm 95;
Matthew Ch. 25, vv. 14-30, 31-46;
Amos Ch. 5, vv. 21-24. |
| (iii) The Holy One | Leviticus Ch. 19, vv. 1, 2, and I Peter Ch. 1, vv. 15, 16;
Isaiah Ch. 6, vv. 1-8. |
| (iv) Loving and forgiving | Luke Ch. 15;
Psalm 103. |

God the Son

- (i) The Son of God
One with the Father
His Sonship is eternal
The only begotten Son
Confirmed by the Father
Matthew Ch. 21, vv. 33–41.
John Ch. 1, vv. 1–15.
John Ch. 8, v. 58.
John Ch. 3, v. 16.
Mark Ch. 1, vv. 1–11;
Luke Ch. 9, vv. 28–36.
- (ii) The Messiah
Born in fulfilment of prophecy
Self confessed
Acclaimed by the disciples
Acclaimed by a Gentile
Genesis Ch. 3, v. 15.
Luke Ch. 1, vv. 26–35.
John Ch. 4, v. 26.
Mark Ch. 16, v. 16.
Mark Ch. 15, v. 39.
- (iii) The Word made Flesh
John Ch. 1, v. 14;
John Ch. 4, vv. 6–7;
Luke Ch. 4, v. 2;
John Ch. 19, v. 28;
Mark Ch. 11, vv. 15–19;
John Ch. 11, v. 35.
His Divine Power seen in His miracles.
Mark Ch. 1, v. 21–Ch. 2, v. 12.
Mark Ch. 4, vv. 35–41;
Mark Ch. 6, vv. 30–44.
- (iv) The Saviour
Came to fulfil the Law
Came to save men
A planned mission
A voluntary, deliberate death
A Risen Lord
The person and work of Christ
Matthew Ch. 5, vv. 17, 18.
John Ch. 1, v. 29.
Mark Ch. 9, vv. 31–32.
John Ch. 10, vv. 17, 18.
John Ch. 11, v. 25.
Philippians Ch. 2, vv. 5–11.

God the Holy Spirit

- (i) The Holy Spirit is a person
John Ch. 14, vv. 15–20, 26.
- (ii) Jesus Himself was inspired by the spirit
Luke Ch. 4, vv. 16–21.
- (iii) God gives the Holy Spirit to those who ask
Luke Ch. 11, v. 13.
- (iv) The gift of the Holy Spirit
Acts Ch. 2, vv. 1–13, 37–41.
- (v) The power of the spirit
Acts Ch. 1, vv. 6–8;
Acts Ch. 3, vv. 1–10.
- (vi) The work of the Spirit
to testify of Christ
to guide believers and to show things to come
John Ch. 15, b. 26.
John Ch. 16, v. 13;
Acts Ch. 13, vv. 1–4;
Acts Ch. 16, vv. 6, 7.
the source of the graces of the Christian life
Galatians Ch. 5, vv. 22, 23.
the source of different abilities in the Christian Church
I Corinthians Ch. 12, vv. 4–13.

GOD'S PURPOSE FOR MAN

Man's Duty to God

- (i) To love Him
Mark Ch. 12, vv. 28–30 (superseding Deuteronomy, Ch. 6, v. 4 and Exodus Ch. 20, vv. 1–11).
- (ii) To trust Him
John Ch. 14, vv. 1, 27;
Mark Ch. 9, vv. 14–29.
- (iii) Have Faith in Him
Hebrews Ch. 12, vv. 1–3;
James Ch. 2, vv. 14–17.
Jesus helped those with faith
Matthew Ch. 8, vv. 5–13;
Luke Ch. 17, vv. 11–19;
Matthew Ch. 9, vv. 20–22.

- (iv) To serve Him
 Matthew Ch. 22, vv. 15-22;
 Matthew Ch. 25, vv. 14-30;
 John Ch. 13, vv. 1-15;
 Mark Ch. 14, vv. 22-23.
- (v) To worship Him as a member of the Christian Church
- The way of prayer
 Matthew Ch. 6, vv. 5-15;
 Matthew Ch. 7, vv. 7-11;
 John Ch. 14, vv. 13-14;
 John Ch. 16, vv. 23-24;
 Luke Ch. 11, vv. 5-13.
- The way of fellowship as expressed in the life of the Church
 Matthew Ch. 18, vv. 15-20;
 Acts Ch. 2, vv. 42-47;
 Acts Ch. 4, vv. 32-37;
 John Ch. 17, vv. 20-23;
 Ephesians Ch. 4, vv. 1-16.
- The way of action. A study of the life and work of one of the following:
 Father Damien.
 Trevor Huddleston.
 Dr. Barnardo.
- Man's Duty to His Neighbour*
- Jesus' Second Commandment
 Loving ourselves
 Truth, sincerity and fulfilment
 Mark Ch. 12, vv. 28-31.
- Loving others
 Who is my neighbour?
 Serving those in need
 Matthew Ch. 7, vv. 15-20;
 Matthew Ch. 7, vv. 21-27;
 I Corinthians Ch. 13.
- Co-operating with others
 Loving our enemies
 our friends
 our families
 Luke Ch. 10, vv. 29-37.
 Matthew Ch. 25, vv. 31-45;
 Mark Ch. 9, vv. 33-37;
 Luke Ch. 16, vv. 19-31.
 Mark Ch. 9, vv. 38-41.
 Luke Ch. 6, vv. 27-38.
 John Ch. 15, vv. 12-13;
 I Samuel Ch. 18, vv. 1-4.
 Mark Ch. 10, vv. 1-16;
 Matthew Ch. 5, vv. 27-32;
 Luke Ch. 2, vv. 40-52;
 Mark Ch. 7, vv. 9-13;
 John Ch. 19, vv. 26-27;
 Ephesians Ch. 6, vv. 1-4.

SUGGESTED TOPICS FOR COURSE WORK

The Christian Church

The study of a local church (or, for Jewish pupils, the synagogue), its history, teaching and practice. This could take the form of an account or diary of the worship and practice of the community during a set period of time, e.g. six months.

Modes of Christian worship.

Christian doctrine. The Catechism.

A period of Church history.

An aspect of, or the development of Christian Art, Architecture or Music.

Christian Action

A study of a Christian Youth organisation.

A study of a Christian Society involved in social service—e.g. the Salvation Army, Dr. Barnardo's.

A study of a Christian missionary activity—a study of one society, one field, or one aspect of the work, e.g. medicine, agriculture.

A study of a great Christian character.

An account or diary of some Christian social service undertaken by the school, a group, or an individual.

Christian Viewpoints on Some Problem(s)

Christianity and Science; friendship and marriage; suffering; or other personal, social and moral responsibilities.

Christian Authority

How we got our Bible.

Archaeology and the Bible.

A survey of one book of the Bible.

• A study of Bible teaching on one subject, e.g. prayer, discipleship.

Other Faiths and Sects

Comparative religion.

Other Suggestions

Dramatic script of a Bible story.

A collection of short poems,

radio scripts,

forms of service suitable for special occasions.

A model, e.g. the synagogue, the Tabernacle, a local church, with accompanying notes and descriptions.

Bible stories in modern English, with illustrations.

A frieze in any medium, e.g. paper, embroidery, appliqué, fretwork, with a Biblical theme.

SECTION 10—SCIENCES

SYLLABUS—PHYSICS

1. The order of items in the syllabus is not to be regarded as indicating any particular sequence in teaching them.

2. The syllabus has been drawn up on the assumption that schools entering candidates will provide a minimum of $2\frac{1}{2}$ hours per week teaching time in Physics for the two years previous to the examination or the equivalent time spread over more years, and that candidates have themselves carried out practical work.

3. The examination will consist of three parts:

Part 1: A *short-answer* paper consisting of approximately 25–30 questions each of which may be subdivided into several parts. Time allowed: 1 hour. (25% of the total marks will be allocated to Part 1.)

Part 2: An *essay type* paper containing a wide selection of questions from which candidates will be required to choose *five*. Time allowed: 2 hours. (50% of the marks will be allocated to Part 2.)

Part 3: A *practical* examination, which may take one of the following three forms, according to the choice of the candidate:

- (a) assessment of experimental work performed by the candidate under examination conditions;
- (b) assessment of an approved project* carried out by the candidate over a period of time during the course;
- (c) assessment of practical notebooks, which should contain reports of at least 24 experiments performed by the candidate during the two school years previous to the examination.

(25% of the total marks will be allocated to Part 3.)

Magnetism

Properties of magnets, attraction and repulsion, shielding, lines and fields of force. Magnetic induction. The compass.

Electro-magnetism

Production of magnets and methods of demagnetising.

* Details of the nature of projects which candidates propose to carry out for Part 3 (b) must be submitted to the Board for approval at least twelve months prior to the Examination.

Electricity

Sources of electricity and mention of generators. The dry cell and accumulators (no chemical equations).

Energy transformations. Heating effects of a current—fires, irons, lamps. Wiring systems—use of switches, fuses, earth, safety precautions.

Electro-magnetism—bell, relay, telephone. Field around a straight wire, coil and solenoid. Behaviour of a current in a magnetic field. Simple electric motor, construction of a moving coil meter, use of ammeter and voltmeter in circuitry.

Chemical effects of a current. Simple electrolysis and practical applications, dependence of weight of deposit on current and time.

Measurement of electricity in terms of coulombs, amps, volts, ohms, watts, and Board of Trade units. (No formal definitions will be required.) Ohm's Law (without verification), simple calculations based on Ohm's Law, in series and parallel circuits. Resistance determination by use of (a) ammeter and voltmeter method, (b) substitution method. (No internal resistance of cells involved.)

Electromagnetic Induction

Simple treatment. Construction and simple principles of AC and DC generators. The induction coil, transformer and Grid system, house wiring and cost of electricity in the home.

Electronics

Operation of diode crystals and transistors and their use in circuits. The diode valve as a rectifier. High voltage discharge at low pressure, fluorescent lamps, cathode ray tubes, magnetic and electric deflection of cathode rays. Uses of X-rays and hazards. Bohr's picture of the atom.

Heat

Expansion and contraction of solids, liquids and gases. Differential expansion and applications. Anomalous expansion of water. Liquid in glass thermometers and industrial thermometers.

Three states of matter. Latent heat and simple kinetic theory. Boiling, condensation and evaporation.

Transmission of heat—conduction, convection and radiation. The household hot-water system, central heating, vacuum flask.

Energy. Heat as a form of energy, conversion of heat to work. Simple consideration of the steam engine, internal combustion engine, turbines, jets and rockets.

Units. The calorie, kilo-calorie, British Thermal Unit and therm. Household cost (gas bills).

Calorimetry. Simple calorimetry not involving water equivalents.

Light

Rectilinear propagation of light. Formation of shadows and eclipses. The pin-hole camera.

Plane and curved mirrors—formation of images (problems involving formulae will not be set). Laws of reflection and applications of mirrors.

Refraction in terms of velocity of light in a medium. Refraction through solids and liquids, real and apparent depths, total internal reflection and critical angle, examples in everyday life.

Images formed by spherical lenses, converging and diverging. Positions and properties of images. Problems involving graphical treatment only. Magnification. Use of lenses in magnifying glass, camera, astronomical telescope, opera glass.

The eye. Optical principles, defects and correction by spectacles.

Refraction through a triangular prism. Spectrum of white light. Production of a pure spectrum.

Colour. Additive and subtractive colour, pigments, appearance of objects in different coloured lights. Ultra-violet and infra-red. The photo-electric cell.

Sound

Production of sound by vibrations. Transmission of sound.

Speed of sound, echoes, sound barrier.

Frequency and pitch. Standing waves.

Vibrations of strings and air columns and applications to any one stringed instrument and any one wind instrument.

Human ear and its functions.

General Physics

Measurement of length, mass, weight and time.

Density and relative density (Sp. Gr.). Archimedes' Principle and flotation, hydrometers and the Plimsoll line.

Pressure in liquids. The hydraulic press. Brakes. Variations of pressure with depth and density.

Air pressure. The simple mercury barometer, the aneroid barometer and altimeter.

Pumps—air and water types. Vacuum pumps and brakes.

Forces. Names of common forces—gravity, friction, push and pull, tension in a string.

Levers. Moment of a force. Use of a beam balance. Principle of Moments. Simple treatment of machines, pulleys, wheel and axle gears. Mechanical advantage, velocity ratio and efficiency. Work and power, centre of gravity and stability. Effects of friction.

Hooke's Law and the spring balance.

Parallelogram of forces, composition and resolution.

SYLLABUS—CHEMISTRY

1. The order of items in the syllabus is not to be regarded as indicating any particular sequence in teaching them.

2. The syllabus has been drawn up on the assumption that schools entering candidates will provide a minimum of $2\frac{1}{2}$ hours per week teaching time in Chemistry for the two years previous to the examination or the equivalent time spread over more years, and that candidates have themselves carried out practical work.

3. The examination will consist of three parts:

Part 1: A *short-answer* paper consisting of approximately 25–30 questions, each of which may be subdivided into several parts. Time allowed: 1 hour. (25% of the total marks will be allocated to Part 1.)

Part 2: An *essay-type* paper containing a wide selection of questions from which candidates will be required to choose *five*. Time allowed: 2 hours. (50% of the marks will be allocated to Part 2.)

Part 3: A *practical* examination, which may take one of the following three forms, according to the choice of the candidate:

- assessment of experimental work performed by the candidate under examination conditions;
- assessment of an approved project* carried out by the candidate over a period of time during the course;
- assessment of practical notebooks, which should contain reports of at least 24 experiments performed by the candidate during the two school years previous to the examination.

(25% of the total marks will be allocated to Part 3.)

* Details of the nature of projects which candidates propose to carry out for Part 3 (b) must be submitted to the Board for approval at least twelve months prior to the Examination.

1. Chemical and Physical Change.

Elements, compounds and mixtures.

Solutions of various types including elementary treatment of colloids.

Solubility curves for solid-in-liquid solutions, without discontinuity.

2. Law of conservation of mass and energy.
Law of Definite Proportions.
Laws of Charles and Boyle.
Kelvin scale. Vapour Density of Gases.

3. Concepts of atoms and molecules. Diffusion of liquids and gases. Atomic weights and molecular weights.

Elementary ideas on structure of the atom. Atomic number. Isotopes. The idea of valency (a) electrovalency (ions) (b) covalency.

The Periodic Law.

Symbols and Formulae.

Calculation of Empirical Formulae from percentage composition.

Chemical Equations with simple calculations. Gay Lussac's Law of Volumes. Avogadro's Hypothesis. Gram molecular Volume. Calculations of volumes of gases involved in reactions.

Effect of heat upon: cupric carbonate, mercuric oxide, lead nitrate, iodine, sulphur, ammonium chloride and copper sulphate crystals.

Resolution of mixtures provides training in basic laboratory skills—filtration, crystallisation, distillation, etc. Purification of crude materials.

E.g. raw sugar, rock salt. Linked with purification. Gas in liquid, liquid-in-liquid, solid-in-solid, etc.

Leading to simple treatment of Atomic Energy.

Calculations will cancel, no logs required.

Equivalent weight *determinations* not required since these are time-consuming and are no longer essential in either determination of atomic weight or in volumetric analysis.

As illustrated by Periodic Table.

4. Non-conductors. Conductors: (a) Benzene, carbon tetrachloride, sugar solution, metals, (b) solutions or melts. Consideration of simple metallic and ionic lattices. Electrolysis. Electrolytes and non-electrolytes, i.e. electrovalent compounds compared with covalent. Faraday's 1st Law. Electro-chemical Series. Simple properties of acids, bases and salts. Preparations of salts.
5. Reversible reactions with suitable illustrations. The effects of temperature, pressure, light and catalysts on rate of chemical reaction.
6. Air. Constituents. Composition by volume. Rusting of iron, slow-burning of phosphorus, alkaline pyrogallol. Air a mixture. Liquefaction of air. Air pollution.
7. Oxygen. Laboratory preparation. Retained as an example of catalysis. Properties and uses. As an example of fractional distillation. Manufacture of oxygen. Simple examples only required. Acidic and basic oxides. Example of allotropy. Interest value. Oxidation and reduction. Ozone.
8. Hydrogen. Laboratory preparation by any one method. Manufacture. Properties and uses. Including hydrogenation of coal and of oils. Manufacture of ammonia and hydrochloric acid.
9. Water. Action of water upon sodium, potassium, calcium, magnesium and iron. Electrolysis of water acceptable though eudiometric method preferred. Volume composition. Hydrates and water of crystallisation. Deliquescence and efflorescence. Drying agents. Natural waters. Hardness of water. Water softening. Soaps and detergents. See Section 2. Inserted for Domestic Science purposes as explaining action of saponification. Hydrogen peroxide as a bleacher. sodium perborate, etc., in domestic cleansers.
10. Nitrogen. Properties. Uses of important compounds. Mention of fertilisers, dyestuffs, explosives. Ammonia. Laboratory preparation. Outline of manufacture by Haber process. Properties and uses. Ammonium hydroxide, chloride, sulphate and nitrate. Common uses. Nitric acid. Laboratory preparation, properties and chief uses. Nitrates. Especially of metals in Section 14. Their behaviour in accordance with position of metal in E.C. Series.
11. Carbon. Allotropy. Should be confined to diamond and graphite. Lattices. Carbon dioxide. Laboratory preparation. Properties and uses. Especially of metals in Section 14. Special reference to bicarbonates of calcium and sodium. Carbonates. Bicarbonates. Carbon monoxide. Laboratory preparation, properties and uses.

Combustion and flame.

Structures of flames, of hydrogen in oxygen, candle, bunsen, with and without air, 'striking back'.

Carbon and carbon compounds as sources of energy.

Outline of the carbon cycle.

Chain structure in carbon chemistry; simple well-known examples of paraffin, olefin, alcohol and fatty acid, leading to esterification and polymerisation. Fuel gases.

It is envisaged that modern plastics, e.g. Terylene and Polythene, will be discussed. Also included under 'carbon compounds as sources of energy' as above.

12. Chlorine. Laboratory preparation; manufacture from salt. Simple properties—bleaching.

Hydrogen chloride. Laboratory preparation; properties. Hydrochloric acid; manufacture properties and uses. Chlorides.

Bleaching powder and proprietary 'bleaches'.

13. Sulphur. Occurrence and extraction. Allotropy. Simple properties and uses of sulphur. Sulphur dioxide. Laboratory preparation; manufacture; properties and uses.

Conversion of sulphur dioxide to sulphur trioxide.

Sulphuric acid. Outline of manufacture by contact process; properties and uses.

Sulphates.

With special reference to chlorides of metals specified in Section 14.

14. Metals.

The following metals should receive attention: calcium, sodium, aluminium, zinc, iron, tin, lead and copper. Extraction of aluminium, iron and copper.

Compounds of metals as called for in previous sections, viz.: oxides, hydroxides, nitrates, chlorides, sulphates and carbonates.

General properties of metals in contrast to non-metals.

Alloys. Steel.

Corrosion. Anti-corrosive treatments.

With special reference to sulphates of metals specified in Section 14.

Selected as illustrating the most common methods of smelting.

SYLLABUS—PHYSICS-with-CHEMISTRY

1. The order of items in the syllabus is not to be regarded as indicating any particular sequence in teaching them.

2. The syllabus has been drawn up on the assumption that schools entering candidates will provide a minimum of $2\frac{1}{2}$ hours per week teaching time in Physics-with-Chemistry for the two years previous to the examination or the equivalent time spread over more years, and that candidates have themselves carried out practical work.

3. The examination will consist of three parts:

Part 1: A short-answer paper in both Physics and Chemistry drawn from all parts of the syllabus.

Duration: 1 hour. (25% of the total marks will be allocated to this Part.)

Part 2: An *essay-type* paper containing a wide selection of questions from which candidates will be required to choose five.

Time allowed: 2 hours. (50% of the total marks will be allocated to this Part.)

Part 3: A *practical* examination which may take one of the following three forms, according to the choice of the candidate:

- (a) assessment of experimental work performed by the candidate under examination conditions;
- (b) assessment of an approved* project carried out by the candidate over a period of time during the course;
- (c) assessment of practical notebooks, which should contain reports of at least twenty-four experiments performed by the candidate during the two years previous to the examination.

(25% of the total marks allocated to this Part.)

Part 1—Physics

Magnetism

Properties of magnets, attraction and repulsion, shielding, lines and fields of force. Magnetic induction. The compass.

Electro-magnetism

Production of magnets and methods of demagnetising.

Electricity

Sources of electricity and mention of generators. The dry cell and accumulators (no chemical equations).

Energy transformations. Heating effects of a current—fires, irons, lamps. Wiring systems—use of switches, fuses, earth, safety precautions. House wiring and costs.

Electro-magnetism. The electric bell. Field around a straight wire, coil and solenoid. Behaviour of a current in a magnetic field. Simple electric motor, use of ammeter and voltmeter in circuitry.

Measurement of electricity in terms of amps, ohms, volts, watts and Board of Trade units (no formal definitions will be required). Ohm's Law (without verification), simple calculations based on Ohm's Law, in series and parallel circuits.

Electromagnetic induction. Simple treatment of alternating current. The cycle dynamo and the transformer.

Heat

Expansion and contraction of solids, liquids and gases. Differential expansion and applications. The anomalous expansion of water. Liquid-in-glass thermometers. The clinical thermometer.

Three states of matter. Boiling, condensation and evaporation. Latent heat.

Transmission of heat—conduction, convection and radiation. The household hot water system, central heating. The vacuum flask.

Energy. The internal combustion engine.

* Details of the nature of projects which candidates propose to carry out for Part 3 (b) must be submitted to the Board for approval at least 12 months prior to the examination.

Units. The calorie, kilo-calorie, British Thermal Unit and therm. Household cost (gas bills).

Calorimetry. Simple calorimetry not involving water equivalents.

Light

Rectilinear propagation of light and reflection at plane surfaces. Simple treatment of refraction. Total internal reflection. Converging *lenses* only. Graphical determination of size and position of image. The *eye* and *camera*.

Deviation, dispersion and the spectrum. Mention of infra-red and ultra-violet. The appearance of objects in different coloured lights.

Sound

Production of sound by vibration and application to any one-stringed instrument.

General Physics

Measurement of length, mass, weight and time.

Density and relative density. Demonstration of Archimedes' principle and application to flotation, hydrometers and Plimsoll line.

Air pressure. The simple mercury barometer, the aneroid barometer and altimeter. Cycle pump and valve.

Forces. Simple treatment of forces, moment of a force and Principle of Moments. Levers and their uses. Force of gravity and its application to Space travel. Centre of gravity. The beam balance and laws of the spring balance.

Part 2—Chemistry

1. Chemical and Physical Change.

Effect of heat upon: cupric carbonate, mercuric oxide, lead nitrate, iodine, sulphur, ammonium chloride and copper sulphate crystals.

Elements, compounds and mixtures.

Resolution of mixtures provides training in basic techniques: solution, filtration, distillation crystallisation, etc.

2. Law of conservation of mass and energy.

Leading to simple considerations of atomic energy.

Law of Definite Proportions.

The concepts of atoms and molecules. Diffusion of gases and liquids. Avogadro's Hypothesis. The idea that atoms are built up of protons, neutrons and electrons leading to simple treatment of valency. Atomic number, isotopes. Periodic Law.

Illustrated by reference to Periodic Table.

Symbols and formulae. Chemical equations with simple calculations.

3. Air. Constituents and composition by volume. Air as a mixture. Air pollution.

Burning phosphorus. Rusting iron. Pyrogallol. Liquefaction of iron.

4. Oxygen. Laboratory preparation to illustrate (a) catalysis, (b) the effect of heat upon rate of chemical reaction. Properties and uses of oxygen.

As an example of fractional distillation.

Manufacture of oxygen. Acidic and basic oxides. Oxidation and reduction.

5. Hydrogen. Laboratory preparation by any one method. Manufacture, properties and uses. Including hydrogenation of coal and of oils. Manufacture of ammonia and hydrochloric acid.
6. Water. Action of water upon sodium, potassium, calcium, magnesium and iron. Volume composition of water. Hydrates and water of crystallisation. Deliquescence and efflorescence. Drying agents. Natural water. Hardness of water. Water softening. Soaps and detergents. Illustrating principle of Electro-chemical Series. Electrolysis of water acceptable though eudiometric method preferred.
7. Nitrogen. Properties and uses of the following nitrogen compounds: ammonia, nitric acid and their respective salts. Mention of fertilisers, dyestuffs and explosives.
8. Carbon. Carbon dioxide, preparation, properties and uses; carbonates and bicarbonates. Carbon monoxide. Combustion and flame. Special reference to those of calcium and sodium. Carbon and carbon compounds as sources of energy. Fuel gases. Outline of carbon cycle. It is suggested that some teachers might care to compare calorific values in simple ways.
9. Common Salt. Laboratory preparations of hydrogen chloride and of chlorine from salt. Simple properties of hydrogen chloride and of chlorine. Hydrochloric acid; properties and uses. Chlorides. Of metals mentioned below.
10. Sulphur. Simple properties and uses of sulphur. Sulphur dioxide. Laboratory preparation and manufacture. Properties and uses. Conversion of sulphur dioxide to sulphuric acid. Outline of manufacture of sulphuric acid by contact process. Properties and chief uses of sulphuric acid. Sulphates. Of metals mentioned below.
11. The general properties of metals and non-metals. Compounds of metals as called for in previous sections, viz.: oxides, hydroxides, nitrates, chlorides, sulphates and carbonates. Metals suggested for consideration are: calcium, sodium, aluminium, zinc, iron, tin, lead and copper. The extraction of aluminium, iron and copper, each from only one of their common ores. Steel. Metal corrosion and methods employed to prevent it.

SYLLABUS—BIOLOGY

There will be one paper of 2½ hours. This will involve one compulsory question containing short questions on a number of specific topics and one limited-choice question designed to test the candidate's power of recording observations, both verbally and by means of drawing. Although no practical examination will

be set, it is intended that the approach to the subject should be a practical one, and questions will be framed in such a way as to test practical experience, observation and deduction.

Individual projects by students working alone or in pairs may be submitted in connection with the examination. This work will be graded A-E by the candidate's teacher concerned. All rough notebooks, in addition to completed work, will be made available to the external examiner and the marks considered in the final assessment by him. Such marks will be regarded as having a positive rather than a negative value.

1. Characteristics of living organisms.
2. The cell, tissues and organs.
3. Outline classification of plants and animals, including the major phyla, showing variety, range and inter-relationships.
4. Functional approach to plant and animal life with examples from all the main groups of living organisms including the human, covering the following: respiration, nutrition, excretion, movement, growth, reproduction and sensitivity.
5. Life histories: of two named insects, one harmful and one beneficial, one amphibian and one mammal.
6. Simple ecology of a suitable habitat such as an aquarium, a pond, a garden plot or sea-shore.
7. Simple inheritance and evolution.
8. Biography of some biological scientists such as Darwin, Mendel, Pasteur, Jenner, Fleming, Curie and Harvey.

SYLLABUS—SOCIAL BIOLOGY

The syllabus is intended to reflect a study of man in his environment, emphasising the interdependence of man and other living things. A practical approach through actual contact with soil, plants and animals in their natural or man-made environments should be used to supplement and interpret the more academic parts of the syllabus whenever possible.

To this end Section 2 of the syllabus has been so arranged that candidates can, in the main, take its several headings as projects, group or individual, which should be carried out as private study, perhaps as homework, over a period of at least one year. For this purpose both rough field books and written-up notebooks giving conclusions drawn from recorded observations will be submitted to the examiners for evaluation and marking. 25% of the total marks will be allocated for this Section.

There will also be a written paper consisting of two parts:

- (a) a large number of short questions, covering the whole syllabus;
- (b) a paper requiring full answers to questions chosen from a total of twelve.

The written paper will carry 75% of the total marks.

Section 1

Man as a Mammal

The human body. Support and movement, bones and muscles. Digestive and excretory systems; dentition in man.

Respiration; circulation; the endocrine system, especially its influence on growth and development. The central and other nervous systems. The ear and the eye. Senses, sight, hearing, taste, pain, reactions to external stimuli; reflexes, 'instinctive' and conditioned in man and animals. The blood system. Reproduction and elementary treatment of the foetus.

Food. Essential constituents of food, balanced diet. Plants as sources of food; starch and sugar formation; proteins. Animals, including fish, as sources of food; animal fats and oils; first-class protein.

Comparison of man's diet with that of other higher mammals; carnivores, herbivores, omnivores. Specialised dentition and digestive systems of the other groups as exemplified by the cat, rabbit, cattle and pigs.

Food chains; predators and prey with species survival mechanisms; diet, locomotion, defence, camouflage, etc. Plant responses; light, water, temperature. Tests for foods.

Section 2

Man's Place in World of Living Things

General classification of plants and animals; the features by which we recognise the main phyla.

Study of Animals

The animal cell.
Mitosis and meiosis.
Reproduction, development and growth.
Study of a named animal, either fish, insect, amphibian, bird or mammal.

Study of Plants

The plant cell.
Mitosis and meiosis.
Reproduction, development and growth.
Study of a named group of plants, either ferns or mosses, gymnosperms or angiosperms.

Linked lives and abnormal nutrition; parasitism (example: nematodes); symbiosis (example: *Rhizobium radicola*). Fungus, e.g. ringworm, a fungus of animals; potato blight, a fungus of plants.

Habitats of living things. The soil, including a study of local soils; salt and fresh water. Ecological study of a local habitat (a great deal can be learned from an intensive study of even a back garden if no other local source is available).

Economic uses of plants; food, timber, paper, drugs, fuel, etc.

Economic uses of animals: food, clothing, transport, medicine, etc. Brief study of crop and animal husbandry.

Biological control of pests and diseases harmful to man's interests.

Section 3

Disease and Health

Bacteria and viruses as pathogens. Bacterial and virus diseases of man and other mammals and plants; as exemplified by tuberculosis, typhoid, influenza, bacterial canker and tobacco mosaic of plants. Beneficial bacteria; the nitrogen cycle, 'decay', food preservation. Public Health: water supply, sanitation, sewage treatment. Pasteurisation, immunisation and vaccination. The work of Pasteur, Fleming, Waksman, Salk.

Section 4

Evolution, Variation, Natural Selection

The work of Darwin and Mendel. Mendelism, elementary to one factor difference. Genotype and phenotype. Hereditary characteristics. Dominant and recessive characters and their effects. Hair and eye colour in man; sex-linkage in poultry. The work of geneticists in plant and animal breeding to increase world's food supply. Survival of man; interdependence of man and his natural environment, the soil, plant and animal kingdoms. Man's urgent need for the conservation and preservation of his food sources and measures now being taken by the United Nations and other agencies.

SYLLABUS—NURSING STUDIES

The syllabus is designed primarily, though not exclusively, for girls; it covers the pre-nursing training considered helpful for those who wish to be trained later as nurses, and is at the same time an extremely useful study for any girl as a preparation for her future family life. It therefore covers a wide range of topics: biology, child-care, hygiene, elementary dietetics, clothing requirements, first aid.

Wherever possible, pupils should be encouraged to join the St. John Ambulance Brigade or the British Red Cross. During the school course visits, in small groups, to clinics would be most valuable. Local medical officers of health and the welfare services could well be approached for help. At all points of the syllabus which offer suitable opportunities, practical work should be done.

There will be two written papers, one of 1 hour and one of 1½ hours.

Paper 1 (1 hour) will consist of about 30 questions, each requiring a short answer. They will cover a wide range of the syllabus. No choice will be given.

Paper 2 (1½ hours) will consist of more searching questions from which candidates will choose four. The paper may be divided into sections to ensure selection from a reasonable spread of syllabus, but in each case choice will be given.

There will also be a practical test. This will be designed to provide evidence that the pupil has done practical work in the subject, either in class or in the laboratory, or in some other suitable way.

One of the following alternatives may be offered for the practical test:

- (a) *A project.* This is to be a piece of individual research into some topic selected by the pupil, approved by the teacher, and carried out over a reasonable period of time. The results should be written up and illustrated and the finished work might occupy, perhaps, half an exercise book. The examiners will not expect projects to be complicated anatomical studies; a study entitled, for instance, 'The Skin' dealing with its care, its function, intelligent use of make-up, etc., would be of more real value than a complicated series of detailed drawings of the skeleton of which candidates would not have any depth of understanding.
- (b) *A diary of public service.* This will consist of a certified record of duties arranged through such organisations as the Red Cross and the various

Welfare Services, carried out over a reasonable period of time. It can be hospital or first-aid post duties, care of the aged, help in clinics or any similar work considered within the candidate's capacity. The diary should record the date of each duty, the nature of work attempted—a note, where applicable, of the reason why that particular work was necessary, together with any other information which could make the account more interesting and more complete.

- (c) The production of a *Certificate of Proficiency* in First Aid or Home Nursing, awarded by the S.J.A.B. or the British Red Cross for passing an examination after an approved course of study either in or out of school, together with a grading by the school of the pupil's ability (A to D) where D denotes merely the ability to pass and A an extremely efficient pupil.
- (d) A *practical examination*, based on the syllabus. Several sections may be set; the first will be compulsory and candidates will be required to choose one or two of the other sections.

Marks will be allocated to each of the three parts of the examination as follows:

Paper 1	40
Paper 2	40
Practical	20

SYLLABUS

Cells, tissues, organs.

Food—diet—care of food—food tests.

Formation of teeth, dental care. Digestion, absorption, use of food. Internal parasites.

Air, exercise. Breathing—internal respiration. Artificial respiration.

Composition and function of the blood. Blood groups. The Rhesus factor. Heart, circulation. The pulse. External haemorrhage and treatment of wounds. Regulation of body temperature. Clothing.

Waste products. Elimination by kidney, colon and skin. Hygiene of elimination. Sewage disposal. Flies. Hair. Skin and hair parasites. Burns and scalds.

Structure and function of the skeleton. Joints. Hygiene of the feet and hands. Muscles, exercise, rest, fatigue, posture. Fainting. Fractures, sprains and ruptures.

Brain, spinal cord and the nerves. Reflex and voluntary action. Sense organs. Defects. Mental hygiene, smoking, drinking, etc. Endocrines, insulin, thyroid, adrenalin, etc.

Reproductive cells and their formation. Sex organs and hormones. Inherited characters. Development. Care of pregnant mother and baby up to one year. Antenatal clinics. Clothing. Hygiene of menstruation.

Pure water supply. Water-borne diseases. Micro-organisms. Natural and artificial defences against them.

SYLLABUS—ENGINEERING SCIENCE

The examination will consist of two parts:

Part 1. A written paper of $2\frac{1}{2}$ hours based on the syllabus below.

It will be appreciated by teachers that in order fully to understand certain sections of this syllabus, as well as various aspects of Part 2 work, candidates should have an elementary knowledge of general Physics and Chemistry.

Candidates will be expected to have carried out basic experimental work related to all branches of the syllabus and to be familiar with practical applications both in the general field of engineering and in the everyday environment.

Calculations will be of a direct nature. No system of units is specified. It is hoped that candidates will be encouraged to use British Standards Institute units for mechanical work; metric units should be used in electricity and heat questions only.

This paper will consist of Section A, consisting of a number of compulsory questions requiring short answers and Section B consisting of questions requiring longer answers, with a wide choice allowed.

The written paper will carry 70% of the total marks.

Part 2. A Practical Project

Candidates will be expected to make a special study of some branch of Engineering Science to show acquaintance with applications both of the basic syllabus and relevant extensions of it. They will be required to present a *report* of this work. This should include notes of laboratory experiments and use of special test equipment. Models, diagrams, photographs and individually constructed equipment of a nature related to the project may also be presented.

No syllabus is provided, but for *guidance* as to the nature and depth of work expected, a few examples are given below.

It is anticipated that this project might usefully be complemented by work in other branches of an engineering course, e.g. Technical Drawing or Metalwork. The emphasis of the project is, however, to be on *practical applied science*.

This part of the examination will carry 30% of the total marks.

Candidates must satisfy the examiners in *both* parts of the examination.

SYLLABUS FOR PART 1

Units of length, mass and time. Use of vernier calipers and micrometer gauges. Density and specific gravity; determination by direct methods and hydrometer. Atmospheric pressure; the mercury barometer. Pressure gauges, including a type for very low pressures. Fluid pressure and its transmission. Simple forms of pumps; use of a siphon. Boyle's law.

Force and its representation as a vector. Graphical determination of the resultant of two forces acting at a point. Graphical treatment of three coplanar forces acting at a point in equilibrium. Moments and equilibrium. Centre of gravity.

Simple machines—levers, pulleys, gear wheels, screw.

Velocity and acceleration. Relation between force and acceleration. Work, power and energy. Conservation of energy.

Friction. Coefficient of friction. Effect of lubrication.

Stretching of wires and springs. Hooke's law. Load-extension graphs.

Heat as from a form of energy. Transference of heat by conduction, convection and radiation. Measurement of temperature including simple methods for very high temperatures. Centigrade (Celsius) and Fahrenheit scales and their conversion.

Quantity of heat; calorie and B.Th.U.; calorific value. Specific heat and latent heat and their determination by simple methods. Change of state in general.

Expansion of solids, liquids and gases—qualitative treatment. Coefficient of linear expansion. Thermostats.

Simple problems involving mechanical equivalent of heat; determination of ' J ' will not be expected.

Basic ideas of simple electrical circuits to include the meanings of potential difference and current (in terms of electron flow).

Conductors and insulators. Ohm's law; resistance. Measurement of resistance by ammeter/voltmeter. Series and parallel combinations of resistors.

Electrical energy—especially as applied to heating. General principles and uses of primary and secondary cells and their maintenance. (No details of chemical action expected.) Qualitative treatment of chemical effect of a current.

Magnetic effect of a current. Electro-magnets and applications. Magnetic fields due to straight wires and solenoid. Simple electric motors. Uses of moving-coil and moving-iron meters.

Induced currents. Simple dynamo. Elementary treatment of A.C.

Simple construction and use of a transformer. Relative merits of A.C. and D.C.

SUGGESTIONS FOR PART 2

Automobile Engineering

Essential parts of an engine and other vehicle accessories; outline knowledge of their function and materials from which they are made. Two- and four-stroke cycles.

Petrol pumps—mechanical and electrical.

High voltage production and distribution.

Cooling system, pressurised cap, water pump.

Hydraulic brakes and master cylinder.

Carburetter.

Ignition advance—use of stroboscope to measure this.

Elementary Radio

Uses of resistors, inductors and capacitors in D.C. and A.C. circuits.

Rectifiers—metal, crystal, diode valve.

Headphones, loudspeaker, microphone.

Simple construction of crystal or single-valve sets; power packs and/or amplifiers.

Domestic Electrical Installation

Conductors—wire tables and uses. Insulators—wire covering, plugs.
House circuits—ring mains, plug types.
Fuses—various types—safety precautions.
Lamps—various forms of illumination—possibly historical approach.
Heaters—element type, immersion type, convectors, fan heaters.
Various applications of motors—simple maintenance.
Electric bell and similar devices.

Generation and Distribution of Electricity

Power stations; coal/oil, hydro-electric, nuclear.
A.C. and D.C. generators.
Grid system—transformers, high-voltage transmission, cables and insulation problems.

Metallurgy

Basic chemistry. Production of iron and steel.
Ductility, malleability and toughness.
Testing—tensile, hardness, impact.
Metal fatigue.
Crystalline structure of metals; alloys. Dendritic growth.
Thermal equilibrium diagrams (lead/tin; iron/carbon).
Metallography—simple preparation and examination of specimens; etching reagents.
Heat treatment of carbon steels.
Extraction of aluminium and copper and their alloys.

Other Suitable Topics would include:

Aeronautics—possibly with meteorology.
Metrology.
Surveying and other simple aspects of Civil Engineering.

SYLLABUS—GENERAL SCIENCE

The examination will be in three parts:

- Part 1** will consist of a short-answer paper of the objective type for which $1\frac{1}{2}$ hours will be allowed. This Part will carry 30% of the marks.
- Part 2** will consist of longer-type questions, all on General Science. No question will deal with Physics, Chemistry or Biology only. Five questions are to be attempted from a choice of eight. If any school has studied any branch of the subject to a greater depth than is normally required by the syllabus (for example Astronomy, Radio, etc.), then the fifth question may be replaced by one set by that school on its own particular topic, subject to its approval by the Board. The time allowed for the paper will be $2\frac{1}{2}$ hours. This Part will carry 45% of the marks.

Part 3. A *practical* examination, which may take one of the following three forms, according to the choice of the candidate:

- (a) assessment of experimental work performed by the candidate under examination conditions;
- (b) assessment of an approved project* carried out by the candidate over a period of time during the course;
- (c) assessment of practical notebooks, which should contain reports of at least 24 experiments performed by the candidate during the two school years previous to the examination.

25% of the total marks will be allocated to this Part.

SYLLABUS

This is a wide syllabus and is designed to be covered over five years. Whilst it is expected General Science will be the only science subject some pupils will take, it is also expected that this syllabus will form a basic science course for the first two or three years before specialisation begins in one or more of other Science subjects offered by the Board.

It is hoped that in the first two years pupils will be given a wide general background of General Science in as many topics as possible, to help them understand everyday applications of Science in the world around them.

Although the syllabus is set out in sections, it is hoped that each part of it will be taught as General Science. The examination questions will be based on this assumption.

The subject should be taught in a qualitative rather than in a quantitative manner and the emphasis should be on applying scientific principles rather than memorising facts.

Whenever possible practical work should be carried out by the pupils themselves and questions will be asked that test the application of scientific method.

Introduction to Science

Brief history of science. Scientific apparatus, measurement and units, safety precautions, scientific method.

Water

Water as a solvent, solutions, suspensions, filtration, distillation, crystals. Sources of water, water cycle, household supply and fittings, water pressure, siphon, disposal of water, 'U' bends, sewage disposal. Change of state—ice, water, steam; wax, naphtha, simple applications, nature of solids, liquids and gases. Life in water, all things need water, adaptations of fish.

Air

Composition of air, the earth's atmosphere, weather, air pressure, the barometer, water vapour. Burning, oxygen and simple properties and uses. Outline of respiration of organisms, plants and animals. Carbon dioxide and simple properties. Air pollution, smoke, bacteria, corrosive gases, smoking and health.

* Details of the nature of the projects which candidates propose to carry out for Part 3 (b) must be submitted to the Board for approval at least twelve months prior to the examination.

Earth

Solar system, with some idea of distances involved, satellites, eclipses, moon and tides. Gravity in the universe and on earth. Soil composition, types of soil, cultivation, fertilisers. Soil erosion and prevention. Chalk, sand and clay, pottery, humus, lime and concrete. Capillarity.

Plants

Germination of seeds. Parts of the plant and functions. Pollination and fertilisation, seed dispersal, photosynthesis. Characteristics of living and non-living things. Simple cell structure. The amoeba.

Energy

Sun as source of energy, other sources. Transformation and conservation of energy. Coal, production of coal gas and by-products. Oil and cracking. Expansion, thermometers, thermostats, thermometer scales F. and C. Transfer of heat, conduction and insulation; convection in liquids and gases; radiation, heat from sun, black and white surfaces. Heat and temperature, calories, B.Th.U. and Therms, related to everyday use. Sources of light, propagation, reflection at plane, convex and concave mirrors; refraction, lenses, prisms, colour (simple treatment without the use of calculations or scale diagrams). Domestic illumination and shadows. Spectrum, infra-red, ultra-violet, radio waves, X-rays, atomic radiation, fall-out dangers, uses in medicine.

Sound, vibrations, sound waves, transmission, frequency, amplitude, applications to musical instruments.

Properties of a magnet, magnetisation and demagnetisation, magnetic fields, earth as a magnet, compass, uses of magnets.

Electricity, flow of electrons, conductors and insulators, simple circuits, volt as a unit of pressure, ampere as a unit of flow, ohm as a unit of resistance, watt as a unit of power, kilowatt hour, unit and cost of electricity. Simple domestic electrical appliances, domestic lighting circuit and ring main. Importance of fusing and earthing. Electro-magnetism, generation of electricity, simple bicycle alternator, chemical generation by dry cell. Simple motor. Early inventions and applications of labour-saving devices. Rollers, wheels, gears, levers and pulleys. Friction and lubrication. Heat engines, I.C. engines, jet and rocket engines.

Chemistry

Acids and alkalis, salts in common use. The common metals, simple properties and uses. Iron and rusting, common alloys. Surface tension, soap, detergents, hardness of water. Plastics and man-made fibres.

Biology

Evolution—outline only, heredity, selective breeding. Skeleton, support, protection and motion, refer to levers. Muscles, skin. Blood system, red and white cells, heart, arteries and veins. Digestive system, types of food, balanced diet, large calorie, vitamins and deficiencies. Respiration and gas exchange, lungs and blood system, artificial respiration, mouth-to-mouth method. Excretion, kidneys, lungs and skin. Nervous system, brain and spinal cord, reflex actions. The eye and the ear. Reproduction (including twins), cell division,

heredity. World population, world food supply. First aid, treatment for shock, burns and bleeding, fractures. Bacteria and viruses, hygiene, food handling and storage, vaccination, immunisation and epidemics.

SYLLABUS—RURAL SCIENCE

The examination will be in three parts:

- (1) **Practical course work**, which will carry 30% of the total marks. A record of at least one year's practical work on two or more of the Sections listed below *plus* work on Section A (Basic Principles).
- (2) **An individual or group study** of a special topic or series of experiments chosen by the candidate in consultation with his teacher. This will carry 20% of the marks.
- (3) **Two written papers**
Paper 1—1½ hours on Section A. This will carry 20% of the marks.
Paper 2—2 hours on a choice from Sections B–E. This will carry 30% of the marks.

Each paper will consist of a number of short questions needing short factual answers, and a number of essay-type questions.

Section A—Basic Principles

- (1) Characteristics of living organisms.
- (2) Differences between plants and animals.
- (3) Elementary genetics—Mendel's 1st and 2nd laws, mono- and di-hybrid inheritance to f_2 generation.
- (4) Study of flowering plants.
- (5) Study of soils—their formation and characteristics (including knowledge of pH).
- (6) Soil population.
- (7) Principles and methods of soil cultivations.
- (8) Study of manures, fertilisers and lime.
- (9) Study of the weather and climate in so far as they relate to farming and gardening.

Section B—Gardening

- (1) Use and care of garden tools.
- (2) Study of the propagation, cultivation and care of the following:
 - common vegetables—include rotation;
 - hardy herbaceous perennials;
 - hardy and half-hardy annuals and biennials (including those plants treated as biennials);
 - lawns;
 - soft fruit;
 - top fruit;
 - trees, shrubs and hedges.
- (3) Garden design—construction of paths, ponds, rock gardens, etc.
- (4) Recognition and control of garden pests and diseases.

Section C—Protected Cultivation

- (i) Types of greenhouses, frames, cloches and their use with and without artificial heat and light.
 - (ii) Cultivation and care of common plants grown under glass.
 - (iii) Seed and potting composts.
 - (iv) Pests and diseases, and their control.
 - (v) Propagation of greenhouse plants.
- (This section will not include questions on commercial greenhouse practice.)

Section D—Farm and Livestock

- (i) A study of one or more of the following: poultry, rabbit, pig, sheep, goat, cow, bee.
For each chosen animal the following details should be covered: external features, skeleton, digestion, circulation, excretion, reproduction, pests and diseases, breeding, systems of housing and management, products from the animal.
- (ii) Farm crops—study of their cultivation. Harvesting and storage of root crops, cereals, grasses.
- (iii) The relation between farm animals and crops in the economy of the farm.
- (iv) Pests and diseases of farm crops.

Section E—Ecology and Forestry

- (i) Plant associations—dominant plants.
- (ii) Animal territory—migration—hibernation.
- (iii) Observation and study of wild life to include a mammal, a bird, a reptile an insect and an animal of pond or pool.
- (iv) Study and recognition of common plants and trees.
- (v) Fauna and flora associated with selected trees.
- (vi) Pests and diseases of woodland and their control.

SECTION 11—TECHNICAL SUBJECTS

SYLLABUS—WOODWORK

The examination will be in three parts:

1. An assessment of the course work of the final year.
2. A Practical test.
3. A written paper on craft knowledge.

1. Course Work

The proportion of the total marks allocated to the assessment of the course work of the final year will be 45%. The assessment will be made by the teacher.

The work may be in the form of one major piece or several smaller pieces; in either case it should represent at least two terms' work.

Visiting examiners will inspect the work during the first part of the summer term. Visits will be arranged as far as possible to coincide with the normal workshop period of the group to be examined, and all candidates should be present at that time to discuss their work with the examiner.

All the drawings, sketches, reference books, etc., from which the candidate will be working should be available for inspection by the examiner, but the standard of technical drawing will *not* be assessed, since the time given to the teaching of this subject varies considerably as from one school to another, and there is in any case to be a separate examination for it.

It is understood that the teacher will continue to give advice to candidates on their course work, to approve stage-by-stage progress and to correct tendencies to basically unsound short-cuts or other departures from commonly accepted constructional principles.

The teacher will be required, in advance of the examination, to provide a rank order of marks, on a percentage scale, which will take into account the work done over the whole period by his candidates, in addition to his rating of the quality and appearance of the finished work.

2. Practical Test

The proportion of the total marks allocated to the Practical Test will be 25%. A bench test of 3 hours will be set, involving basic constructional methods, to be devised with special reference to the whole range of ability of candidates. The test will be purely an exercise of skill and constructional knowledge, using the common hand tools.

The material will be supplied prepared to thickness, the widths to be planed by the candidate.

Visiting examiners will not be present for the Practical Test. The Invigilator

will be a teacher not connected with Handicrafts, but the Woodwork teacher will be in attendance throughout the Test.

3. Written Paper—Craft Knowledge

The proportion of the total marks allocated to the Written Paper will be 30%. The time allowed will be 1½ hours.

Section 1. Questions will be carefully phrased so as to elicit answers requiring the minimum of words, to enable the candidate to 'establish that he has learned enough about the materials, tools, and processes of his craft, to practise it intelligently'.

Sketches will be required for some of the answers, but a lack of sketching prowess will not in itself result in a loss of marks; if the sketch clearly indicates the correct answer the appropriate mark will be given.

One or more of the questions will be given in the form of sketch blanks, the candidate being required to fill in the relevant details such as part names, grain directions, etc. There will also be printed profiles of tools and joints which candidates will be required to name.

Section 2. Questions will be so framed as to encourage longer and more thoughtful answers from those candidates who are able to express themselves well, whilst at the same time permitting all candidates to give adequate answers.

There will be one question from each of the syllabus headings: Timber, Tools, Construction, Materials, Finishing. Candidates will be required to answer four out of the five questions. All the questions will carry equal marks.

The marks for the whole paper will be divided equally between the two sections.

The questions in both sections of the paper will relate to the candidate's own experience in the school workshop, and the general knowledge he has gained from it, rather than to the rote learning of text-book information and data. The headings are given as a statement of what is believed to be common basic coverage of the subject, in the school woodwork shops of the region.

SYLLABUS

Timber

Growth and simple structure of the tree. Location of main sources of supply. Simple classification and uses of common hardwoods and softwoods. Conversion, seasoning, defects, diseases and storage.

Tools

Construction, function, proper use and maintenance of the common hand tools.

Construction

Stool, box, frame and carcass; cross-halvings and dovetail halvings, mortice and tenons, housings, through dovetail and lapped dovetail. Rubbed, tongued, dowelled, and slot-screwed jointing, and clamp, pocket, batten and button fixings. Good proportion and appearance in relation to functional purpose.

Materials

Preparation, application and properties of animal and synthetic glues. Panel pins, nails and screws. Locks and hinges. Manufactured boards and sheets. Wood and resin laminates. Abrasives.

Finishing

Preparation of surfaces (smoothing plane and scraper, glasspaper through the grades, damping, etc.) for various finishes. Any finish to be described, whether for softwoods or hardwoods, will be left for the candidate to choose.

SYLLABUS—METALWORK

The syllabus is designed to encourage the development of the pupil through the medium of metalworking and associated techniques and skills.

It would be inappropriate to define in precise terms the contents or limits of the subject, for to do so might tend to restrict rather than to reflect the ever widening scope of school metalwork. In broad terms it might best be understood as the fashioning of metal by hand or machine, employing sound techniques appropriate to students at secondary school level.

The stimulus provided by practical activity to strengthen the essential links with other subjects should be fostered. The nature of metalwork demands orderly thought, precise definition and methodical approach; these are vital to the attainment of worthwhile standards in many subjects.

The examination will therefore aim to discover how well pupils can perform in those branches of the craft in which they have special interest rather than to expose their weaknesses in a form of work in which they have little skill or experience.

It must be recognised, however, that an examination cannot cater for every exigency, however broad its syllabus, but the appropriate consideration of the aesthetic aspects of a craft, the precise techniques essential to the production of sound castings, or the design factors inherent in mechanical projects, to mention but a few examples, are typical of the factors to be assessed as and where appropriate. Opportunities to reveal such specialist knowledge may be given in all parts of the examination.

It is in the sense of achievement which results from planning, overcoming difficulties and the satisfactory completion of a self-imposed task that handicraft makes its special contribution to a pupil's development as a person, and it is on the basis of such evidence that course work is to be assessed.

The examination will be in four parts:

Part 1: Course Work. The work done by candidates during the last year of the course will be assessed by the teacher; these assessments will be subject to moderation by the Board. 25% of the total marks will be allocated to Part 1.

Part 2: Practical Test. The time allowed for the Practical Test will be 3 hours and it will be externally assessed. 40% of the total marks will be allocated to Part 2.

Part 3: Written Paper—Craft Knowledge. The Written Paper will be of 1½ hours' duration. 20% of the total marks will be allocated to Part 3.

Part 4: Drawing Test. The Drawing Test will be of $\frac{3}{4}$ hour's duration. 15% of the total marks will be allocated to Part 4.

Candidates must satisfy the examiners in all parts of the examination.

Candidates will be allowed 10 minutes before each part of the examination to read the question paper.

Course Work

The work is to be carried out by candidates during the year in which they enter the examination and will be marked by the teacher. The marks must be forwarded to the Board before the other parts of the examination are taken. Course work must be available for moderation until the results are announced.

Practical Test

Four tests will be set:

- (a) Benchwork,
- (b) Bench and machine work,
- (c) Hammered metalwork,
- (d) Forge work.

Candidates will be required to attempt *one* test; the method of selection will be decided by the teacher.

Written Paper—Craft Knowledge

The Paper will be in two sections, each carrying equal marks.

Section 1 will consist of a number of compulsory short questions on basic metalwork knowledge derived from workshop situations.

Section 2 will consist of a variety of longer questions covering all fields of school metalwork, from which a selection may be made. The questions will be directed towards the candidate's own experience and judgment and to the principles which govern working procedure. The candidate will be expected to be able to display sufficient knowledge about tools, materials and processes to ensure the intelligent practice of a chosen craft or crafts.

Drawing Test

Questions will be designed to assess the pupil's ability to read and extract information from typical workshop drawings (to B.S.S. 308) and to convey ideas and information in three dimensions, either freehand or with instruments or grids, including essential details and critical dimensions. The questions will be presented to the candidate in the form of drawings in either 1st or 3rd Angle Projection at the discretion of the teacher. These drawings will conform to standard practice and will be of the same objects.

Candidates will be expected to extract information from one of the projections and give this information in the form of simple detail sketches. Alternatively the answer may be embodied in a single pictorial view giving a three-dimensional interpretation.

SYLLABUS

MATERIALS

- (a) *Ferrous*: A working knowledge of the properties and uses of: mild steel, plain carbon steel.

A reasonable workshop knowledge of the usefulness of: cast iron, high-speed steel and stainless steel.

- (b) *Non-ferrous*: A workshop knowledge of: aluminium and its alloys, copper and its alloys, lead, tin, zinc and silver, soft and hard solders, brazing material.

Note. Detailed questions on the production and manufacture of (a) and (b) above will not be set in the examination.

(c) Questions may be set requiring elementary workshop knowledge of the following: acids (for etching and pickling); lubricants and coolants; polishing, grinding and buffing compounds; the correct grades of abrasive cloths and papers; vitreous enamels, paints and finishes; fluxes; marking-out materials.

TOOLS

Questions will be set to enable the candidate to show his functional knowledge of any of the following hand tools:

- (a) *Marking, Measuring and Testing*

Engineer's steel rule, try square, scribe, dividers, outside, inside and odd-leg calipers. Surface plate and scribing block. Vee-blocks and clamp, angle plates. Micrometers and vernier scale calipers. Feeler gauges, drills, wire and metal gauges, combination square and spirit level, screw thread-pitch gauge and radius gauge.

- (b) *General Hand Tools*

Engineers' and silversmiths' hammers and mallets. Hand hacksaw frames and blades, piercing saw and tension files. Hand and bench shears. Stakes, folding bars and seamers. Hand riveting tools. Flat drills, morse taper shank and parallel shank twist drills, combination centre drills, reamers. All types of hand files commonly used in the school workshop. Taps and dies, soldering irons, forging tools, hand, pin, bench, leg and machine vices. Toolmaker's clamp, pliers, spanners, screwdrivers and socket wrenches.

PROCESSES

Foundry work to include moulding, casting and elementary pattern-making. Measuring, marking and testing, sawing, chiselling, filing, drilling by hand and machine. Folding, seaming and wiring. Hollowing, sinking and raising, planishing. Silver and soft soldering, brazing. Screwing and threading. Hot and cold bending, twisting, drawing down, upsetting. Enamelling, etching and engraving.

The heat treatment of the metals and alloys (as listed above) undertaken in school workshops. Skin hardening of mild steel. Finishing and protection of metals.

MACHINE TOOLS AND MACHINE PROCESSES

Questions will be set enabling the candidate to show detailed practical knowledge of the following:

Drilling machine and procedures for drilling.

Centre lathe. Recognition of main parts. The use of face plates, three and four jaw chucks and collets. Catch plates and carriers, steadies. Facing and

plain turning, taper turning, drilling and boring in the lathe, screwcutting, recognition and use of lathe tools and tool bit holders and appreciation of rake, clearance and cutting angles.

Questions may be set requiring an elementary knowledge of the shaper and vertical and horizontal milling machines. A limited knowledge of these three machines and the ability to indicate by sketches and notes simple operations showing their essential differences will be expected. Candidates will be required to answer questions relating to safety precautions in School Workshops.

Note. Incidental use of other materials such as wood, plastic, and bonding materials, particularly in the course work, is not precluded where appropriate.

SYLLABUS—TECHNICAL DRAWING

Two papers will be set, each carrying 50% of the total marks. Printing, layout, and general presentation will be taken into consideration. Candidates must satisfy the examiners in both papers.

The teacher's assessment of the candidates' last two years' course work may be called for.

Paper I: Geometry. 2 hours, plus 10 minutes reading time.

The paper will be in two sections: Section A—Plane Geometry and Section B—Solid Geometry. There will be four questions in each section. Candidates will be required to answer five questions in all, not more than three being taken from either section.

Section A—Plane Geometry

Construction of triangles, quadrilaterals and regular polygons.

The circle, including tangency.

The ellipse, including focal points and tangents.

Scales, plain and diagonal, and application.

Linear enlargement and reduction.

Loci, limited to link-work, the cycloid.

Archimedes' spiral, involute to the circle and helix.

Section B—Solid Geometry

Isometric and oblique.

Sections of right pyramids, prisms, cones and cylinders.

True shapes and auxiliary views of simple solids in one plane.

Intersections of cylinders and square prisms, co-planar and at 90° .

Development of regular right prisms, right square and right hexagonal pyramids, and right cones, truncated.

Pipe junctions (jointed at right angles).

All geometry questions to be related to items of a practical nature wherever possible.

Paper II: Freehand Drawing and Machine Drawing. $2\frac{1}{2}$ hours, plus 10 minutes reading time. Two questions will be set. Candidates will be required to answer both.

Freehand Drawing (20% of marks)

Freehand drawing on $\frac{1}{4}$ inch squared paper, mainly straight line work, from a photograph or line drawing of a simple object, which may include sections. It is intended to test the ability of the candidate to convey ideas and thoughts by using orthographic sketching.

Machine Drawing (80% of marks)

The questions will be presented in first angle or isometric projection and may be answered in either first or third angle projection, but the candidate must specify which he has used.

Only full-size drawing will be required.

All drawing must be to B.S. 308 conventions.

The questions may be set on: simple castings and simple assemblies, jointly or otherwise, including any of the following: single bushes, oil holes, shafts, simple solid pulleys, webs and ribs; standard hexagonal nuts, bolts, studs, screws and washers drawn to a known convention.

Simple full sections and specified dimensions may be called for and a simple title block will be required.

