

PHYSICS

INTRODUCTION

The public assessment of this subject is based on the Curriculum and Assessment Guide (Secondary 4 to 6) Physics jointly prepared by the Curriculum Development Council and the Hong Kong Examinations and Assessment Authority. Candidates should refer to the section on ‘Curriculum Framework’ in this Guide for the knowledge, understanding, skills and attitudes they are required to demonstrate in the assessment. Candidates are expected to have a general knowledge of the materials contained in the Science Curriculum (Secondary 1-3). The mathematical skills required in the assessment are mainly based on those covered in the Compulsory Part of the Hong Kong Diploma of Secondary Education Mathematics Curriculum.

ASSESSMENT OBJECTIVES

The objectives of the public assessment of Physics are to evaluate candidates’ ability to:

1. recall and show understanding of the facts, concepts, models and principles of physics, and the relationships between different topic areas in the curriculum framework;
2. apply knowledge, concepts and principles of physics to explain phenomena and observations, and to solve problems;
3. show an understanding of the use of apparatus in performing experiments;
4. demonstrate an understanding of the method used in the study of physics;
5. present data in various forms, such as tables, graphs, charts, diagrams, and transpose them from one form into another;
6. analyse and interpret data, and draw appropriate conclusions;
7. show an understanding of the treatment of errors;
8. select, organize, and communicate information clearly, precisely and logically;
9. demonstrate understanding of the applications of physics to daily life and its contributions to the modern world;
10. show awareness of the ethical, moral, social, economic and technological implications of physics, and critically evaluate physics-related issues; and
11. make suggestions, choices and judgments based on the examination of evidence using knowledge and principles of physics.

MODE OF ASSESSMENT

The public assessment of Physics consists of a public examination component and a school-based assessment component as outlined in the following table:

| Component | | Weighting | Duration |
|-------------------------------|---|-----------|-----------------------|
| Public Examination | Paper 1 Questions set on Compulsory Part | 60% | 2 hours 30 minutes |
| | Paper 2 Questions set on Elective Part | 20% | 1 hour |
| School-based Assessment (SBA) | | 20% | |

PUBLIC EXAMINATION

Paper 1 comprises two sections A and B. Section A consists of multiple-choice questions and carries 21% of the subject mark. Section B includes short questions, structured questions and an essay question, and it carries 39% of the subject mark. Candidates have to attempt **all** questions in Paper 1.

Paper 2 contains multiple-choice questions and structured questions set on each of the four elective topics of the curriculum, and questions on each elective carry 10% of the subject mark. Candidates are to attempt questions from any **two** of the four electives.

SCHOOL-BASED ASSESSMENT (SBA)

School-based assessment (SBA) is compulsory for **all** school candidates. Candidates will be assessed by their teachers on their performance of a wide range of skills involved in practical work throughout S5 and S6. Candidates are required to perform a stipulated amount of practical work. The work should be integrated closely with the curriculum and form a part of the normal learning and teaching process. Candidates may also be required to design and conduct an investigative study with a view to solving an authentic problem. They are expected to make use of their knowledge and understanding of physics in performing such an investigative study, through which their generic skills, practical skills, process skills and reporting skills, etc. would be developed and assessed.

The table below summarises the minimum numbers of assessments and the percentage weightings in subject required in S5 and S6 for the SBA:

| | Minimum number of assessments | |
|----|-------------------------------|------------------|
| S5 | 1 EXPT (6%) | |
| S6 | 1 EXPT (6%) | 1 IS / EXPT*(8%) |

- Over the two years of S5 and S6, there should be at least two marks for experiments (EXPT) and one mark for investigative study (IS) or an experiment with a detailed report (EXPT*). The IS / EXPT* mark is to be submitted in S6.

For monitoring and authentication purposes, candidates are required to keep good custody of all their work in SBA until the publication of the HKDSE examination results.

Private candidates need not complete the SBA component. Their subject result will be based entirely on the public examination result.

The detailed requirements, regulations, assessment criteria, guidelines and methods of assessment are provided in the SBA Handbook for HKDSE Physics published by the Hong Kong Examinations and Assessment Authority.