INTEGRATED SCIENCE

INTRODUCTION

The public assessment of this subject is based on the Integrated Science Curriculum and Assessment Guide (Secondary 4-6) jointly prepared by the Curriculum Development Council and the Hong Kong Examinations and Assessment Authority. Candidates have to refer to the Guide for the knowledge, understanding, skills and attitudes they are required to demonstrate in the assessment. Candidates are expected to have general knowledge of the materials contained in the Science Curriculum (Secondary 1-3). The mathematical skills required in the assessment will not exceed those covered in the Compulsory Part of the Hong Kong Diploma of Secondary Education Mathematics Curriculum.

ASSESSMENT OBJECTIVES

The assessment objectives are to evaluate the following abilities of candidates:

1. to recall and show understanding of facts, concepts and principles of science, and the relationships between different topic areas of the curriculum framework;
2. to apply scientific knowledge, concepts and principles to explain phenomena and observations, and to solve problems;
3. to formulate working hypotheses, to plan and to perform tests for them;
4. to show practical skills related to the study of science;
5. to present data in various forms, such as tables, graphs, charts, drawings, diagrams, and to transpose them from one form into another;
6. to analyse and interpret data including numerical and non-numerical data such as those in the form of continuous prose, diagrams, photographs, charts and graphs; to make inferences, logical deductions and draw conclusions from them;
7. to formulate arguments, justify claims, evaluate evidence and detect errors;
8. to select, synthesise, and communicate ideas and information clearly, precisely and logically;
9. to show understanding of the applications of science to daily life and the contributions of science to the modern world;
10. to show awareness of the ethical, moral, social, economic and technological implications of science, and to critically evaluate science-related issues; and
11. to make suggestions, choices and judgements based on scientific knowledge and principles.

MODE OF ASSESSMENT

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

<table>
<thead>
<tr>
<th>Component</th>
<th>Weighting</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public examination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper 1</td>
<td>45%</td>
<td>2 hours</td>
</tr>
<tr>
<td>Paper 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section A</td>
<td>15%</td>
<td>1 hour 30 minutes</td>
</tr>
<tr>
<td>Section B</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>School-based assessment (SBA)</td>
<td>20%</td>
<td></td>
</tr>
</tbody>
</table>

2012-HKDSE-SCI (INT)
PUBLIC EXAMINATION

In Paper 1 and in Paper 2 Section A, all questions are compulsory. In Paper 2 Section B, a choice of two out of the three electives is allowed.

In Paper 1 and in Paper 2 Section B, the types of items include short questions, structured data-response questions and short essays. Some of the questions may be set on unfamiliar situations. In such cases, candidates will be required to study a given piece of information which may be presented in the form of text, diagrams or graphs, and to apply their skills and knowledge to answer questions set on the information given.

SCHOOL-BASED ASSESSMENT (SBA)

School-based assessment (SBA) is compulsory to all school candidates. In the 2012 HKDSE, candidates will be assessed by their teachers on their performance of a wide range of skills involved in practical related tasks throughout S5 and S6.

Practical Related Tasks

Practical related tasks refer to activities which require the use of science apparatus and/or fieldwork. The assessment of practical related tasks covers two ability areas, namely practical abilities (ability area A), and planning and reporting (ability area B).

Ability area A:
(a) to organise and perform practical work, including the use of suitable apparatus and equipment, and the appropriate manipulative skills in carrying out experiments;
(b) to make accurate observations and measurements.

Ability area B:
(a) to identify the problem to be investigated and to formulate a hypothesis, where applicable, and put it into a testable form;
(b) to devise a plan of investigation in accordance with the problem being investigated;
(c) to record and to present data in an appropriate form;
(d) to interpret experimental results and to draw appropriate conclusions.

The table below summarises the percentage weighting and the minimum number of assessments required in S5 and S6 for the different areas of the SBA:

<table>
<thead>
<tr>
<th>Practical related task</th>
<th>Ability area A</th>
<th>Ability area B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting in subject</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Minimum number of assessments</td>
<td>S6</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>S5</td>
<td>1</td>
</tr>
</tbody>
</table>

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 their public examination results.

The detailed requirements, regulations, assessment criteria, guidelines and method of assessment will be provided in the SBA Handbook for HKDSE Integrated Science published by the Hong Kong Examinations and Assessment Authority.

**Non-Practical Related Tasks**

Starting from the 2014 HKDSE, candidates will also be assessed on non-practical related tasks in the SBA. Non-practical related tasks refer to assignments which call for candidates’ generic skills such as creativity, critical-thinking skills, communication skills and problem-solving skills. Examples of such tasks include: oral and written presentation of an information search, writing articles on scientific issues, designing poster/product brochure, building models, using IT tools to illustrate scientific concepts, and doing assignments on understanding and interpretation of scientific data and on application of science in daily life.

The implementation schedule of SBA is as follows:

<table>
<thead>
<tr>
<th>Year of examination</th>
<th>Implementation of SBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012 &amp; 2013</td>
<td>Schools are required to submit SBA marks for the practical related component only. The mark of this component will contribute to 20% of the final subject mark.</td>
</tr>
<tr>
<td>2014 and thereafter</td>
<td>Schools will be required to submit SBA marks for both the practical and non-practical related components. The SBA marks for practical related tasks will constitute 12% of the final subject mark, and those for non-practical related tasks 8% of the final subject mark.</td>
</tr>
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