CHEMISTRY

INTRODUCTION

The public assessment of this subject is based on the Curriculum and Assessment Guide (Secondary 4-6) Chemistry jointly prepared by the Curriculum Development Council and the Hong Kong Examinations and Assessment Authority. Candidates have to 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 will not exceed those covered in the Compulsory Part of the Hong Kong Diploma of Secondary Education Mathematics Curriculum.

ASSESSMENT OBJECTIVES

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

1. recall and show understanding of chemical facts, patterns, principles, terminology and conventions;
2. show an understanding of the use of apparatus and materials in performing experiments;
3. handle materials, manipulate apparatus, carry out experiments safely and make accurate observations;
4. demonstrate an understanding of the method used in chemical investigation;
5. analyse and interpret data from various sources, and draw relevant conclusions;
6. manipulate and translate chemical data and to perform calculations;
7. apply chemical knowledge to explain observations and to solve problems which may involve unfamiliar situations;
8. select and organise scientific information from appropriate sources and to communicate this information in an appropriate and logical manner;
9. understand and evaluate the social, economic, environmental and technological implications of the applications of chemistry; and
10. make decisions based on the examination of evidence and arguments.

MODE OF ASSESSMENT

The public assessment of Chemistry consists 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>
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</thead>
<tbody>
<tr>
<td>Public Examination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper 1</td>
<td>60%</td>
<td>2 hours 30 min</td>
</tr>
<tr>
<td>Paper 2</td>
<td>20%</td>
<td>1 hour</td>
</tr>
<tr>
<td>School-based Assessment (SBA)</td>
<td>20%</td>
<td></td>
</tr>
</tbody>
</table>

**PUBLIC EXAMINATION**

Paper 1 comprises two sections: A and B. Section A consists of multiple-choice questions and carries 18% of the subject mark. Section B includes short questions, structured questions and an essay question, and carries 42% of the subject mark. Candidates have to attempt all questions in this paper.

Paper 2 consists of structured questions and carries 20% of the subject mark. Candidates are required to answer the questions on the 2 electives selected.

**SCHOOL-BASED ASSESSMENT (SBA)**

School-based assessment (SBA) is compulsory for all school candidates. In the 2013 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

Candidates are required to perform a stipulated amount of practical work, which may include designing experiments, reporting and interpreting experimental results, etc. The work should be integrated closely with the curriculum and form a part of the normal learning and teaching process.

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:
**Practical related task**

<table>
<thead>
<tr>
<th>Weighting in subject</th>
<th>Basic Chemical Analysis</th>
<th>Experiment</th>
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</thead>
<tbody>
<tr>
<td>S5</td>
<td>8%</td>
<td>12%</td>
</tr>
<tr>
<td>S6</td>
<td>---</td>
<td>2</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 methods of assessment are provided in the SBA Handbook for HKDSE Chemistry and Combined Science (Chemistry part) published by the Hong Kong Examinations and Assessment Authority.

Apart from these, starting from the 2014 HKDSE, candidates will also be assessed on investigative study in SBA. Candidates will be required to design and conduct a group-based experimental investigative study with a view to solving an authentic problem. They are expected to make use of their knowledge and understanding of chemistry in performing such an investigative study, through which their generic skills, practical skills, process skills and reporting skills, etc. would be developed and assessed.

**Non-Practical Related Tasks**

Starting from the 2014 HKDSE, candidates will also be assessed on non-practical related tasks in SBA. Non-practical related tasks call for generic skills such as creativity, critical-thinking, communication skills and problem-solving skills. Examples of non-practical related tasks include: critically reading, analysing and reporting the contribution of chemistry towards the understanding of the material world; designing a poster or pamphlet with a view to persuading people to follow the principles of green chemistry; writing a report to present the scientific knowledge and concepts acquired after a visit to a chemical plant; developing a multimedia artefact to illustrate the synthesis of polymers.
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>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 16% of the final subject mark, and those for non-practical related tasks 4% of the final subject mark.</td>
</tr>
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