Chemistry
2014 Senior External Examination — Subject notice 1

Information about the 2014 examination

The examination will be based on the Chemistry Senior External Syllabus 1998. It will consist of two papers.

<table>
<thead>
<tr>
<th>Paper</th>
<th>Perusal/planning time</th>
<th>Working time</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>10 minutes</td>
<td>2 hours 30 minutes</td>
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<tr>
<td>Two</td>
<td>10 minutes</td>
<td>2 hours</td>
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Practical work on each of the eight syllabus topics in the Chemistry syllabus should be completed as an integral part of the study of chemistry. Questions in either paper may refer to laboratory exercises undertaken during the year.

Paper One

Paper One will consist of multiple-choice and short-response questions and be a closed-book examination. Data tables will be supplied.

The questions in Part A — Knowledge of subject matter will assess all eight syllabus topics.

The questions in Part B — Scientific processes will assess the following topics:

- Materials — properties, bonding and structure
- Gases and the atmosphere
- Energy and rates of chemical reactions
- Reacting quantities and chemical analysis
- Chemical equilibrium.

Candidates will be expected to organise data, make simple judgments, process and generate information and design simple investigations.

Paper Two

Paper Two will:

- consist of five extended-response questions that assess each candidate’s ability to use complex reasoning processes (candidates choose four questions to respond to)
- be an open-book examination. Candidates are permitted to bring any relevant paper-based written or printed material into the examination room.

The questions will assess the following topics:

- Materials — properties, bonding and structure
- Chemical equilibrium
• Oxidation and reduction; Energy and rates of chemical reactions
• Gases and the atmosphere; Reacting quantities and chemical analysis
• Chemical equilibrium; Energy and rates of chemical reactions.

Syllabus interpretation

Candidates are expected to balance redox equations by both methods — oxidation number and electron transfer — where suitable.

Special adaptations of the general gas equation, include the combined gas law, \( P \, V = n \, R \, T \), include the combined gas law, \( \frac{P_1 \, V_1}{T_1} = \frac{P_2 \, V_2}{T_2} \); Boyle’s Law, \( P_1 \, V_1 = P_2 \, V_2 \); or Charles’ Law, \( \frac{V_1}{T_1} = \frac{V_2}{T_2} \).

Other information

Candidates will not be penalised if responses to examination questions do not contain the correct number of significant figures.

Candidates are expected to correctly name graphs, label axes and state the units being used.

Chemists use the litre freely as a unit of volume (capacity). Consequently, non-SI units can sometimes be encountered. However, wherever possible, SI units are expected except for those involving volumes and concentrations.

Level of achievement

Each candidate’s level of achievement will be determined by applying the syllabus standards to an overall assessment of responses across both Paper One and Paper Two.

Enquiries

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