



**Cambridge International Examinations**  
Cambridge International General Certificate of Secondary Education

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**COMBINED SCIENCE**

**0653/05**

Paper 5 Practical Test

**For Examination from 2019**

SPECIMEN CONFIDENTIAL INSTRUCTIONS

**This document gives details of how to prepare for and administer the practical exam.**

**The information in this document and the identity of any materials supplied by CIE are confidential and must NOT reach candidates either directly or indirectly.**

**The supervisor must complete the report at the end of this document and return it with the scripts.**

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If you have any queries regarding these Confidential Instructions, contact CIE stating the centre number, the syllabus and component number and the nature of the query.

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This document consists of **5** printed pages and **1** blank page.

## General information about practical exams

Centres must follow the guidance on science practical exams given in the *Cambridge Handbook*.

### Safety

Supervisors must follow national and local regulations relating to safety and first aid.

Only those procedures described in the question paper should be attempted.

Supervisors must inform candidates that materials and apparatus used in the exam should be treated with caution. Suitable eye protection should be used where necessary.

The following hazard codes are used in these confidential instructions, where relevant:

<b>C</b>	corrosive	<b>MH</b>	moderate hazard
<b>HH</b>	health hazard	<b>T</b>	acutely toxic
<b>F</b>	flammable	<b>O</b>	oxidising
<b>N</b>	hazardous to the aquatic environment		

Hazard data sheets relating to substances used in this exam should be available from your chemical supplier.

### Before the exam

- The packets containing the question papers must **not** be opened before the exam.
- It is assumed that standard school laboratory facilities, as indicated in the *Guide to Planning Practical Science*, will be available.
- Spare materials and apparatus for the tasks set must be available for candidates, if required.

### During the exam

- It must be made clear to candidates at the start of the exam that they may request spare materials and apparatus for the tasks set.
- Where specified, the supervisor **must** perform the experiments and record the results as instructed. This must be done **out of sight** of the candidates, using the same materials and apparatus as the candidates.
- Any assistance provided to candidates must be recorded in the supervisor's report.
- If any materials or apparatus need to be replaced, for example, in the event of breakage or loss, this must be recorded in the supervisor's report.

### After the exam

- The supervisor must complete a report for each practical session held and each laboratory used.
- Each packet of scripts returned to Cambridge International must contain the following items:
  - the scripts of the candidates specified on the bar code label provided
  - the supervisor's results relevant to these candidates
  - the supervisor's reports relevant to these candidates
  - seating plans for each practical session, referring to each candidate by candidate number
  - the attendance register.

**Specific information for this practical exam**

**During the exam, the supervisor (NOT the invigilator) must do the experiments in Questions 1, 3 and 4 and record the results on a spare copy of the question paper, clearly labelled 'supervisor's results'.**

**For Question 1**

Each candidate will require

- (i) petri dish, labelled A, containing two large insect-pollinated flowers of the same species. The flowers should have both male and female parts (suitable examples are tulip or lily)
- (ii) mounted razor blade or scalpel
- (iii) white tile
- (iv) tweezers
- (v) mounted needle
- (vi) hand lens

**For Question 2**

No apparatus is required for this question.

**For Question 3**

Each candidate will require

- (i) 50 cm<sup>3</sup> solution labelled **A** which is 2.1 g potassium iodate(V), KIO<sub>3</sub> and 20 cm<sup>3</sup> 1.0 mol dm<sup>-3</sup> sulfuric acid made up to 1 dm<sup>3</sup> solution (**this solution should be made within 3 days of the examination**)
- (ii) 40 cm<sup>3</sup> solution labelled **B** which is 1.0 g sodium metabisulfite, Na<sub>2</sub>S<sub>2</sub>O<sub>5</sub> and 20 cm<sup>3</sup> 1.0 mol dm<sup>-3</sup> sulfuric acid made up to 1 dm<sup>3</sup> solution (**this solution should be made up immediately before the examination**)
- (iii) 40 cm<sup>3</sup> 5% starch solution labelled **starch**
- (iv) 50 cm<sup>3</sup> deionised or distilled water
- (v) 10 cm<sup>3</sup> measuring cylinder labelled **A**
- (vi) 10 cm<sup>3</sup> measuring cylinder labelled **B** (a 25 cm<sup>3</sup> measuring cylinder would be acceptable for **B**)
- (vii) test-tube (125 mm × 15 mm) with a mark showing the level for 5 cm<sup>3</sup> and a means to support it
- (viii) 100 cm<sup>3</sup> conical flask
- (ix) stopwatch

During the exam, the supervisor (NOT the invigilator) must do the experiments in Questions 1, 3 and 4 and record the results on a spare copy of the question paper, clearly labelled 'supervisor's results'.

#### For Question 4

Each candidate will require

- (i) metre rule with a millimetre scale
- (ii) pivot – a prism or triangular wooden block marked **P** placed on the bench
- (iii) 50g mass secured to the rule, with its centre above the 5.0cm mark of the rule. The value of the mass must be hidden from the candidates. This mass should be labelled **M**
- (iv) selection of  $10 \times 10\text{g}$  slotted masses, so that candidates can use combinations of these to make up masses of 60g, 70g, 80g, 90g and 100g which will be placed on the rule

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**Supervisor's report**

Syllabus and component number 

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Centre number 

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Centre name .....

Time of the practical session .....

Laboratory name/number .....

**Give details of any difficulties experienced by the centre or by candidates (include the relevant candidate names and candidate numbers).**

You must include:

- any difficulties experienced by the centre in the preparation of materials
- any difficulties experienced by candidates, e.g. due to faulty materials or apparatus
- any specific assistance given to candidates.

Space for supervisor to record results, if relevant, e.g. temperature of the laboratory; results for Question 1.

### Declaration

- 1 Each packet that I am returning to CIE contains the following items:
- the scripts of the candidates specified on the bar code label provided
  - the supervisor's results relevant to these candidates
  - the supervisor's reports relevant to these candidates
  - seating plans for each practical session, referring to each candidate by candidate number
  - the attendance register
- 2 Where the practical exam has taken place in more than one practical session, I have clearly labelled the supervisor's results, supervisor's reports and seating plans with the time and laboratory name/number for that practical session.
- 3 I have included details of difficulties relating to this practical session experienced by the centre or by candidates.
- 4 I have reported any other adverse circumstances affecting candidates, e.g. illness, bereavement or temporary injury, directly to CIE on a *special consideration form*.

Signed ..... (supervisor)

Name (in block capitals) .....