

Cambridge IGCSE™

COMBINED SCIENCE**0653/51**

Paper 5 Practical Test

May/June 2026**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 Cambridge International 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.

INSTRUCTIONS

- If you have any queries regarding these confidential instructions, contact Cambridge International stating the centre number, the syllabus and component number and the nature of the query.
email info@cambridgeinternational.org
phone +44 1223 553554

This document has **8** pages.

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:

C	corrosive	MH	moderate hazard
HH	health hazard	T	acutely toxic
F	flammable	O	oxidising
N	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, 2 and 4 and record the results on a spare copy of the question paper, clearly labelled 'supervisor's results'.

Question 1

Each candidate will require the following materials and apparatus. Labels do **not** need to include concentrations.

hazard	materials and apparatus	quantity per candidate
[MH]	6.0% aqueous hydrogen peroxide in a beaker, labelled hydrogen peroxide (see note 1.1)	30 cm ³
	distilled water in a beaker, labelled distilled water	100 cm ³
	yeast suspension in a beaker, labelled yeast (see note 1.2)	10 cm ³
	large test-tubes / boiling tubes (150 mm × 25 mm)	3
	rack to hold 3 large test-tubes / boiling tubes	1
	aluminium foil, piece approximately 15 cm × 10 cm	3
	10 cm ³ syringe	2
	1 cm ³ syringe	1
	stirring thermometer, −10 °C to +110 °C, with 1 °C graduations	1
	means of writing on glassware	1
	stirring rod	1
	empty 250 cm ³ beaker, labelled waste	1
	access to paper towels	

Notes

- 1.1** The aqueous hydrogen peroxide should be prepared from a new unopened bottle of hydrogen peroxide on the day of the examination.
- 1.2** The yeast suspension is prepared by adding 10 g dried yeast to 100 cm³ of warm distilled water and mixing well. This should be prepared on the day of the examination and stirred well before distributing to candidates.

Action at changeover

Replace all apparatus with clean and dry apparatus. Replace all chemicals.

Question 2

Each candidate will require the following materials and apparatus. Labels do **not** need to include concentrations.

hazard	materials and apparatus	quantity per candidate
[MH][N]	copper carbonate, labelled H supplied in a sealed sample bottle (see note 2.1)	2 g
[MH]	0.5 mol/dm ³ dilute sulfuric acid, labelled dilute sulfuric acid (see note 2.2)	15 cm ³
	10 cm ³ measuring cylinder	1
	100 cm ³ beaker (see note 2.3)	1
	glass stirring rod (see note 2.4)	1
	spatula	1
	filter paper	2
	filter funnel	1
	100 cm ³ conical flask (see note 2.5)	1
	wooden splint	1
	Bunsen burner and a means to light the Bunsen burner	1
	heat proof laboratory mat	1
	access to paper towels	

Notes

- 2.1** Basic copper carbonate can be used instead of copper carbonate. If there is a label for copper carbonate on the sample bottle, it should be covered up.
- 2.2** Provided in a bottle or beaker. Bottles can be shared by no more than four candidates and care must be taken to avoid contamination of the solutions.
- 2.3** A 50 cm³ or 250 cm³ beaker can be used if 100 cm³ beakers are not available.
- 2.4** A plastic stirring rod can be used instead of a glass rod.
- 2.5** A 250 cm³ conical flask can be used if a 100 cm³ conical flask is not available.

Action at changeover

Replace all apparatus with clean and dry apparatus. Replace all chemicals.

Question 3

No apparatus or chemicals are needed for this question.

Question 4

Each candidate will require the following materials and apparatus.

hazard	materials and apparatus	quantity per candidate
	metre ruler (see note 4.1)	1
	110 cm length of constantan swg 28 wire (see note 4.1 and note 4.2)	2
	crocodile clips (see note 4.2)	4
	power supply of approximately 3 V. Where candidates are provided with a power supply with a variable output voltage, the voltage setting should be set by the supervisor and fixed (e.g. taped) (see note 4.3)	1
	ammeter capable of reading up to 1 A or 1.5 A with a minimum precision of 0.05 A (see note 4.3)	1
	voltmeter capable of reading up to 5 V with a minimum precision of 0.1 V (see note 4.3)	1
	5 Ω resistor in a component holder with terminals (See note 4.3)	1
	connecting wires	7
	switch, which may be an integral part of the power supply	1
	tray, for the second wire	1

Notes

- 4.1** One of the lengths of wire should be taped to the metre ruler as shown in Figure 4.1, so that the effective length of the wire is 100 cm.

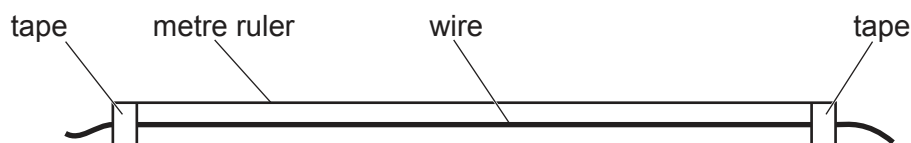


Figure 4.1

- 4.2** The other length of wire should have a crocodile clip connected at each end so that the effective length of the wire between the clips is 100 cm. This should be placed in the tray ready for candidates to use.

4.3 The circuit shown in Figure 4.2 should be set up for the candidates.

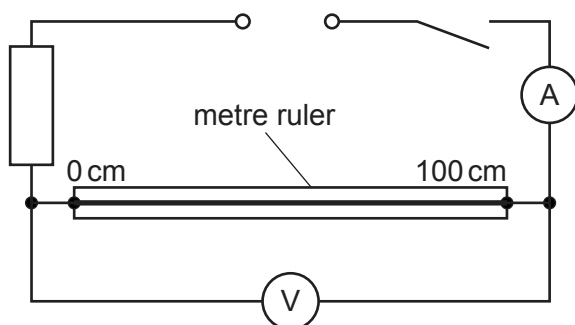


Figure 4.2

Action at changeover

If the apparatus is to be used by another candidate, then it should be restored to its original state. The other length of wire should be put back into the tray.

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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.

Declaration

- 1 Each packet that I am returning to Cambridge International contains all of 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 each practical session.
- 3 I have included details of difficulties relating to each 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 Cambridge International on a *special consideration form*.

Signed (supervisor)

Name (in block capitals)