

Cambridge IGCSE™

COMBINED SCIENCE**0653/52**

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, 3 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.

hazard	materials and apparatus	quantity per candidate
	tomato slice (see note 1.1)	1
	white tile	1
	ruler, 30 cm, graduated in mm	1

Note

- 1.1** Each tomato slice should be prepared by cutting a slice from the middle of a tomato as shown in Figure 1.1. Each slice should be about 5 mm thick. The tomato slices should be freshly prepared on the morning of the exam and presented to candidates on a white tile. More than one slice can be cut from each tomato.

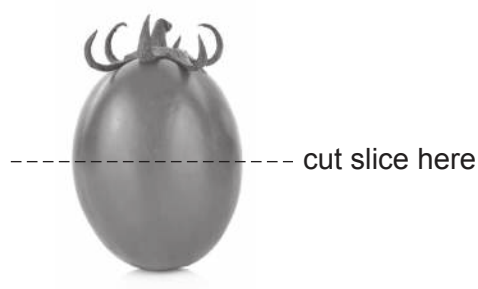


Figure 1.1

Action at changeover

Each candidate should be given a fresh slice of tomato.

Question 2

No materials or apparatus are required for this question.

Question 3

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

hazard	materials and apparatus	quantity per candidate
low hazard	zinc carbonate, labelled metal carbonate supplied in a sealed sample bottle (see note 3.1)	3.0g
[C]	1.0 mol/dm ³ dilute nitric acid, labelled dilute nitric acid (see note 3.2)	15 cm ³
[MH][N]	1.0 mol/dm ³ aqueous ammonia, labelled aqueous ammonia (see note 3.2)	10 cm ³
[C]	1.0 mol/dm ³ aqueous sodium hydroxide, labelled aqueous sodium hydroxide (see note 3.2)	10 cm ³
	balance to measure up to 500 g with a precision of at least 0.1 g (see note 3.3)	1
	spatula	1
	Pyrex or hard glass test-tube 125 mm × 16 mm (see note 3.4)	3
	test-tube holder	1
	test-tube rack	1
	Bunsen burner and a means to light the Bunsen burner	1
	heat proof laboratory mat	1
	boiling tube 150 mm × 25 mm	1
	teat pipette	2
	access to paper towels	

Notes

- 3.1** Basic zinc carbonate can be used instead of zinc carbonate. If there is a label for zinc carbonate on the sample bottle, it should be covered up.
- 3.2** Provided in a dropper bottle or test-tube with teat pipettes. Bottles can be shared by no more than four candidates but care must be taken to avoid contamination of the solutions.
- 3.3** The balance can be shared by candidates. Each candidate will need to make several readings using the balance.
- 3.4** The test-tubes must be clean and dry.

Action at changeover

Replace all apparatus with clean and dry apparatus.

Question 4

Each candidate will require the following materials and apparatus.

hazard	materials and apparatus	quantity per candidate
	string (see note 4.1)	1
	stand, boss and clamp (see note 4.2)	2
	pendulum bob (see note 4.2)	1
	stop-watch with a resolution of 0.1 s or better	1
	metre ruler	1

Notes

4.1 The string must be of length 70 cm with a small loop at each end as shown in Figure 4.1.

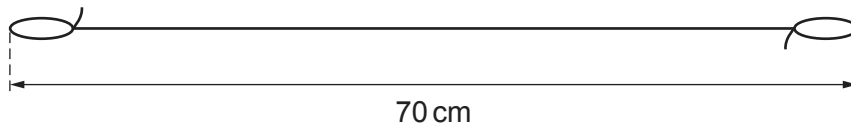


Figure 4.1

4.2 The apparatus should be set up for the candidates as shown in Figure 4.2. The rods of the clamps should be parallel to each other. The string loops should be placed over the rods. The centres of the rods of the clamps must be 40.0 cm apart. The pendulum bob is suspended from the string, e.g. using a hook.

The rods of the clamps should both be approximately 55 cm above the bench.

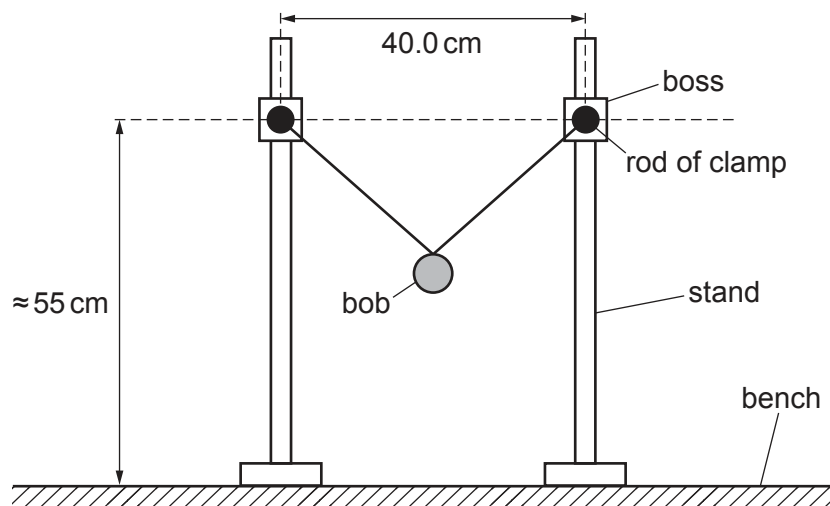


Figure 4.2

Action at changeover

If the apparatus is to be used by another candidate, then it should be restored to its original state.

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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)