CAMBRIDGE
International Education

Cambridge IGCSE™

PHYSICS **0625/52**

Paper 5 Practical Test **May/June 2026**

CONFIDENTIAL INSTRUCTIONS

8932883153

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 **12** pages. Any blank pages are indicated.

DC (SL/SG) 356681/2

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.

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 3 and record the results on a spare copy of the question paper, clearly labelled 'supervisor's results'.

Question 1

Items to be supplied by the centre (per set of apparatus, unless otherwise specified)

(i) 2 × identical 250 cm^3 beakers, each containing 200 cm^3 of water. See note 1.

(ii) 100 cm^3 measuring cylinder filled with water to the 80 cm^3 mark.

(iii) 30 cm ruler, graduated in millimetres. Candidates may use their own.

(iv) Rectangular wooden block with approximate dimensions 2 cm × 3 cm × 4 cm. See note 2.

(v) Access to a top-pan balance capable of recording mass to the nearest 0.1 g. See note 3.

(vi) Paper towels to mop up spillages of water.

Notes

1 One beaker must be labelled 'X' and the other beaker must be labelled 'Y'.

2 The block must be able to fit into the mouth of a 250 cm^3 beaker.

3 There must be sufficient top-pan balances available so that candidates do not suffer undue delay when measuring the mass of the wooden block.

Action at changeover

Remove the wooden block from the beaker and wipe off any excess water from the block.
Check that the beakers and the measuring cylinder are filled to the levels specified above.

Information required by examiners

A sample set of numerical results, clearly marked 'supervisor's results', obtained out of sight of the candidates.

Question 2

Items to be supplied by the centre (per set of apparatus, unless otherwise specified)

(i) 12 V, 24 W lamp in a holder with a suitable power supply connected to it.

(ii) 2 × thermometers, –10 °C to 110 °C graduated in 1 °C intervals. See note 1.

(iii) 2 × clamps, 2 × bosses and 2 × stands. See note 2.

(iv) Piece of white card and a piece of black card. See notes 3 and 4.

(v) Stopwatch.

(vi) 30 cm ruler, graduated in millimetres. Candidates may use their own.

Notes

1 The two thermometers for each candidate **must** be identical.

2 The clamps, bosses and stands must be set up for candidates with the thermometers clamped securely as shown in Figure 2.1. The clamps must not obscure the graduations on the thermometers. The bulb of each thermometer must be level with the filament of the lamp.

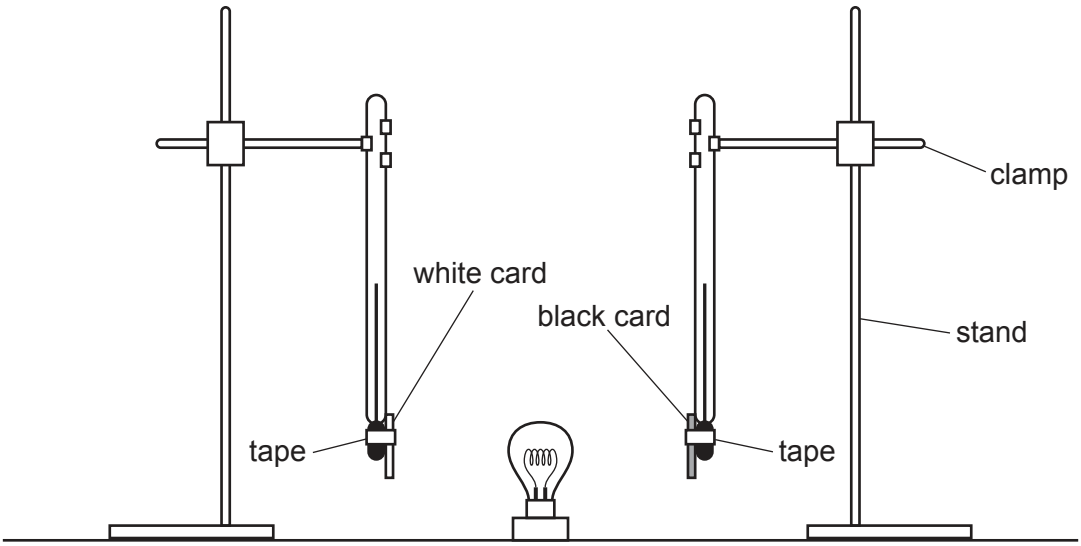

Figure 2.1

3 Each piece of card must be of the same thickness, approximately 160 gsm thin card is suitable, and measure 2.0 cm × 2.0 cm. The black card can be made by completely colouring both sides of a piece of white card with permanent black marker. The two pieces of card are otherwise identical.

4 One card must be attached to the bulb of each thermometer with adhesive tape. The card must touch the thermometer bulb and the adhesive tape attached to the card must go behind the bulb on the side opposite to the card. There must be no adhesive tape between the card and the thermometer bulb. The tape should **not** obscure the front of the card.

Adhesive putty must **not** be used.

Action at changeover

Restore the apparatus to the state shown in Figure 2.1.
Check that both cards are still firmly attached to the thermometer bulbs.

Information required by examiners

A sample set of numerical results, clearly marked ‘supervisor’s results’, obtained out of sight of the candidates.

Question 3

Items to be supplied by the centre (per set of apparatus, unless otherwise specified)

(i) 3–4 V power supply. See note 2.

(ii) Switch.

(iii) Voltmeter capable of measuring the supply e.m.f. with a precision of at least 0.1 V. See note 3.

(iv) Resistor of resistance 18 Ω, labelled 'X'. Candidates must **not** be able easily to detect the value of this resistor. See note 4.

(v) Resistors of resistances 10 Ω, 15 Ω, 18 Ω, 22 Ω and 33 Ω. See note 5.

(vi) Sufficient connecting leads to set up the circuit shown in Figure 3.1.

Notes

1 The supervisor must set up the circuit shown in Figure 3.1 for the candidates in advance of the examination.

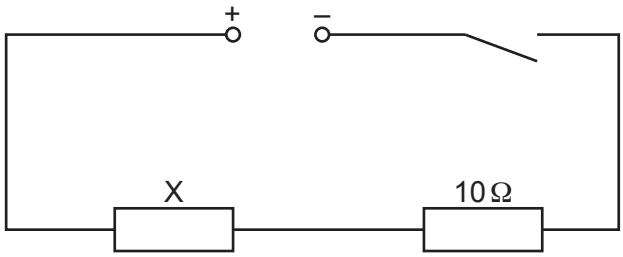

Figure 3.1

2 The following are suitable power sources:

- two 1.5 V dry cells in suitable holders connected in series
- three 1.2 V rechargeable cells in suitable holders connected in series
- d.c. power supply of 3–4 V.

Where candidates are supplied with a power supply with a variable output voltage, the voltage setting should be set by the supervisor and fixed (e.g. taped).
The switch on the power supply should be left turned on and taped, and a separate switch included in the circuit so that candidates can switch the current on and off.

3 An analogue or a digital meter is suitable.
The voltmeter must have two connecting leads that can be connected between various points in the circuit. The positive (+) terminal of the voltmeter must be marked with a '+' sign. The ends of the leads, where they are connected to the voltmeter, must be taped in place securely, so that they cannot be removed.

4 The resistor must be labelled 'X' and have suitable terminals to enable it to be connected into the circuit and to enable the voltmeter to be connected across it in parallel.
The RS Components International component code of a suitable resistor is 683-5657. The resistor should have a power rating of 1–2 W.

5 The resistors must be labelled '10 Ω', '15 Ω', '18 Ω', '22 Ω' and '33 Ω'. The resistors should have a power rating of 1–2 W.

The RS Components International component codes of suitable resistors are:

10 Ω: 707-8782
15 Ω: 683-5653
18 Ω: 683-5657
22 Ω: 683-5666
33 Ω: 683-5663

The resistors must have suitable terminals to enable them to be connected into the circuit.

Action at changeover

The circuit must be restored to its original state, as shown in Figure 3.1, with the switch open and the 10 Ω resistor in the circuit with the additional resistors placed by the side of the circuit.

Information required by examiners

A sample set of numerical results, clearly marked 'supervisor's results', obtained out of sight of the candidates.

Question 4

No apparatus is required for this question.

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Supervisor's report

Syllabus and component number | | | | | / | | |

Centre number | | | | | |

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) .....

