

Cambridge IGCSE™

PHYSICS**0625/52**

Paper 5 Practical Test

February/March 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 **12** pages. Any blank pages are indicated.

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 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) 5 glass marbles. See note 1.
- (ii) 100 cm³ measuring cylinder with graduations of 1 cm³. See note 2.
- (iii) Top-pan balance with a minimum precision of 0.1 g. See note 3.
- (iv) Supply of cold water. See note 4.
- (v) Paper towels to soak up any water spills.

Notes

1. Each candidate will require 5 dry glass marbles.
2. The measuring cylinder must be dry and clean when presented to each candidate. The marbles provided must fit into the measuring cylinder.
3. This item may be shared but candidates will require easy access during the experiment. The top-pan balance must be capable of measuring 250 g.
4. Each candidate will require approximately 50 cm³ of cold water. The temperature of the water is not important.

Action at changeover

Replace the 5 marbles with 5 clean dry marbles.

Replace the measuring cylinder with another clean dry measuring cylinder.

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) Clamp, boss and stand.
- (ii) Expendable spring, approximately 50 mm overall length (including loops) $\times$ 15 mm diameter, capable of supporting at least 600 g without overstretching (e.g. Philip Harris expendable steel spring product code B8A41397, www.philipharris.co.uk).
- (iii) A 100 g mass hanger and four 100 g slotted masses. See note 1.
- (iv) Metre ruler graduated in mm. See note 3.
- (v) Set square.
- (vi) G-clamp.
- (vii) Spare springs should be available.

Notes

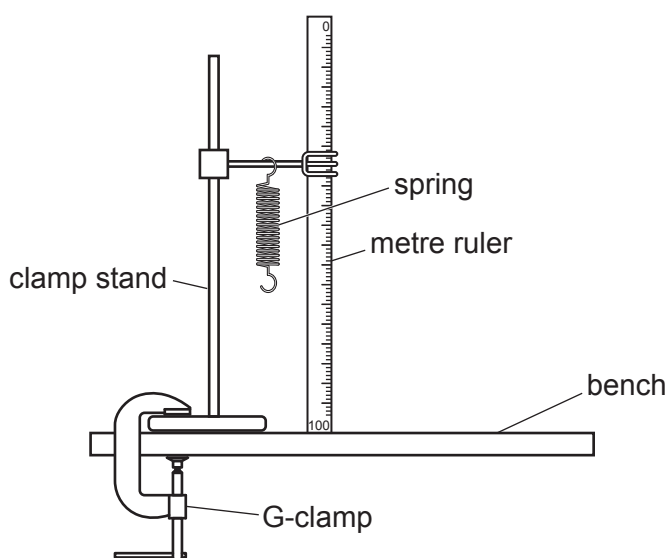


Figure 2.1

1. The four 100 g slotted masses and the 100 g mass hanger should each be labelled '1.0 N'. An alternative to individually labelling the masses is to provide a card with the words 'the mass hanger and masses each have a weight of 1.0 N'. If slotted masses are not available, a light hook must be provided so that up to five 100 g masses, each labelled '1.0 N', can be suspended from the spring.
2. The apparatus is to be set up for the candidates as shown in Figure 2.1. The spring is to be suspended from the clamp, supported by a boss and stand. The stand should be clamped to the desk to prevent it falling over. A heavy mass placed on the base of the clamp stand is a suitable alternative to a G-clamp. The spring must be sufficiently high above the laboratory bench so that when the 5.0 N load is suspended from the spring, the bottom of the load is above the surface of the bench.

3. The metre ruler (supported by the clamp, boss and stand) must be near to, but not touching, the spring. The 100 cm end of the metre ruler must be touching the bench. If the metre ruler has two scales in opposite directions, one scale must be taped over.

Action at changeover

Check that the apparatus is set up ready for the next candidate, as shown in Figure 2.1, with the spring near to the metre ruler.

Replace the spring if it has been overstretched.

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) Eight $10\,\Omega$, $2\,\text{W}$ resistors. Candidates must not be able to detect the values of these resistors. See notes 1, 4 and 6.

(ii) A power supply of approximately $2\text{--}3\,\text{V}$. See note 8.

Where candidates are provided with a variable power supply, the voltage should be set by the supervisor and fixed, e.g. taped.

(iii) A switch. The switch may be an integral part of the power supply.

(iv) Sufficient connecting leads to set up the circuits shown in Figure 3.1, 3.2 and 3.3.

(v) One ammeter capable of measuring currents up to $1.00\,\text{A}$ with a precision of at least $0.05\,\text{A}$. See note 9.

(vi) One voltmeter capable of measuring the potential difference of the supply with a precision of at least $0.1\,\text{V}$. See note 9.

Notes

1. The first circuit is to be set up for candidates as shown in Figure 3.1. The switch should be open.

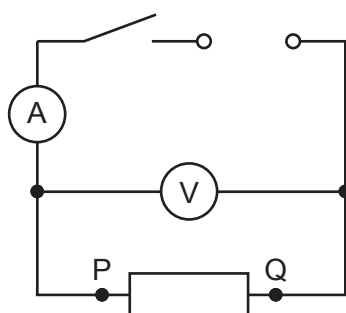


Figure 3.1

2. The connector on one of the wires attached to the resistor must be labelled P and the connector on the other wire attached to the resistor must be labelled Q as shown in Figure 3.1.

3. The circuit should be labelled circuit 1.

4. Resistor Network Y is to be set up for candidates as shown in Figure 3.2.

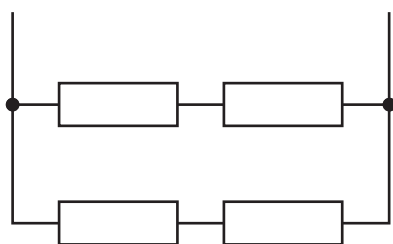


Figure 3.2

5. This resistor network should be labelled Resistor Network Y.
6. Resistor Network Z is to be set up for candidates as shown in Figure 3.3.

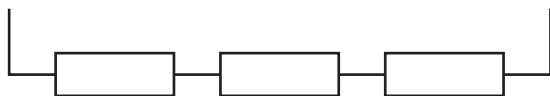


Figure 3.3

7. This resistor network should be labelled Resistor Network Z.
8. If cells are used, two 1.5 V cells connected in series are suitable. They must remain adequately charged throughout the examination. Spare cells must be available.
9. Either analogue or digital meters are suitable. Any variable settings should be set by the supervisor and fixed, e.g. taped.

Action at changeover

Connect the circuit as shown in Figure 3.1 and check that the circuit is working and that the circuit is labelled circuit 1.

Check the connector on one of the wires attached to the resistor is labelled P and the connector on the other wire attached to the resistor is labelled Q as shown in Figure 3.1.

Check that Resistor Network Y is as shown in Figure 3.2 and check that it is labelled Resistor Network Y.

Check that Resistor Network Z is as shown in Figure 3.3 and check that it is labelled Resistor Network Z.

Open the switch on circuit 1.

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

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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)