



**ZIMBABWE SCHOOL EXAMINATIONS COUNCIL**  
General Certificate of Education Advanced Level

**PHYSICS**

PAPER 4 Practical Test

**6032/4**

**NOVEMBER 2020 SESSION**

2 hours 30 minutes

**INSTRUCTIONS TO SUPERVISORS**

**Great care should be taken that any confidential information given does not reach the candidates either directly or indirectly.**

**Prior to the examination, the Supervisor should ensure that all apparatus provided for the candidate, as listed in these instructions, are in good working condition.**

**No access to the Question Paper is allowed before the examination Date and Time.**

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**These Supervisor's Instructions consists of 6 printed pages and 2 blank pages.**

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**Question 1: Apparatus per candidate**

1 × 100 g mass hanger

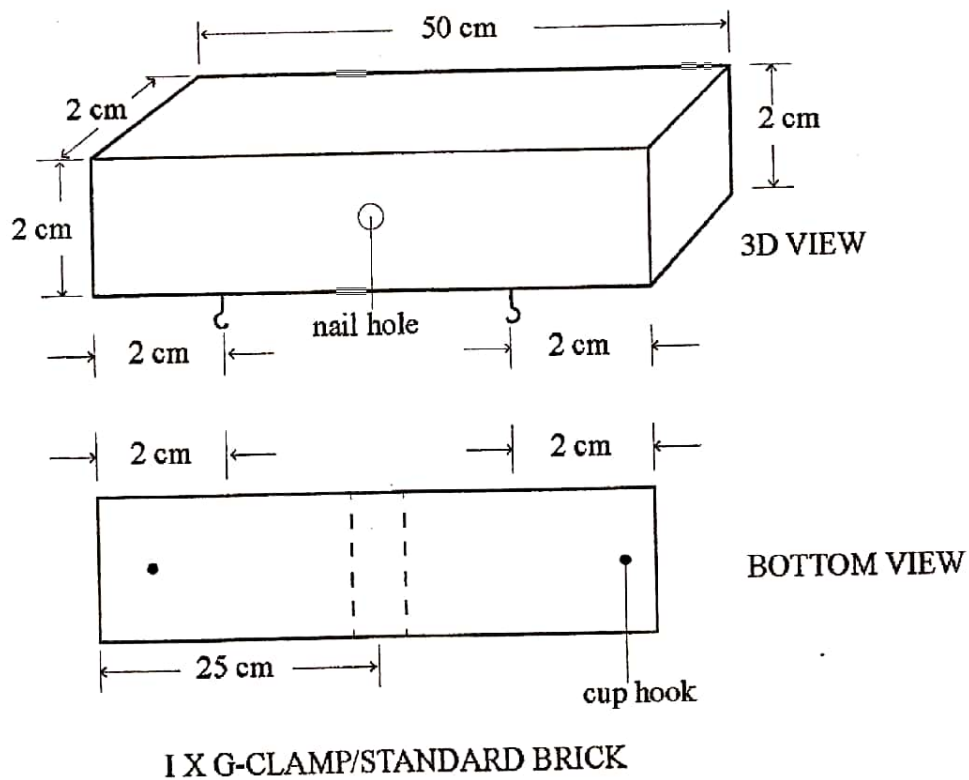
5 × 100 g mass (to fit on the mass hanger)

2 × retort stands with clamps

1 × 2 inch iron nail

1 × 2 cm helical spring

1 × wooden beam (2 cm × 2 cm × 50 cm) with a hole and 2 cuphooks as shown

1 × stopwatch ( $\approx 0.01$  s)

**Question 2: Apparatus per candidate**

1 × 1 000  $\mu\text{F}$  electrolytic capacitor (with terminals well labelled + and -)

1 × Voltmeter 0 – 10 V with precision  $\approx 0.01$  V or better (digital multimeter preferable)

1 × 100  $\text{k}\Omega$  carbon resistor

1 × 100  $\Omega$  resistor

1 × 8 – 10 V source

2 × switches labelled  $S_1$  and  $S_2$

enough connecting leads and plugable crocodile clips/banana plugs