**232/3**

**PHYSICS PAPER 3**

**CONFIDENTIAL**

**DECEMBER EXAM**

**PHYSICS CONFIDENTIAL 2021**

**CONFIDENTIAL INSTRUCTIONS TO SCHOOLS**

Provide each candidate with the following:

**QUESTION 1**

* Stand, clamp and boss
* Thread- 3 pieces of length 20cm each.
* Rectangular wooden block labeled P
* Beaker -250ml
* Metre rule
* Paraffin - To be put into the beaker up to ¾ way full
* 50g mass
* Vernier calipers (*to be shared*)
* A piece of masking tape

*\*The rectangular block is of dimensions 4cm by 4cm by 7. 5cm and softwood. It should be painted white and calibrated with 0. 5cm divisions as shown below. A hook or small piece of nail is attached.*



**QUESTION 2**

* a new D sized dry cell
* a cell holder which can accommodate one dry cell
* a switch
* a mounted nichrome wire of gauge 28 on a millimetre scale.
* A 10Ω resistor labelled C.
* A center zero galvanometer, G
* 8 connecting wires, four of which with crocodile clips at both ends.
* A resistor, R of resistance 150Ω mounted on a small wooden block and having clean terminals (not rusted)
* A 4Ω resistor labelled with the value.
* a metre rule
* a thin lens of focal length 20cm
* a lens holder
* a white cardboard screen
* a piece of plasticine, about 20g
* a candle ( and access to a match box)
* a cross-wire (fixed into a hole in a cardboard screen)
* a plane mirror of approximate dimension 4cm by 8cm
* a piece of cellotape.