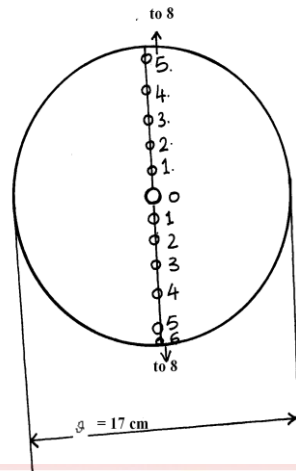


These instructions should not reach the candidates either directly or indirectly.  
Each candidate will require the following apparatus.

- One circular card cut from carton box of thickness approximate (2 – 3) mm of diameter 17cm. Draw a diameter across the card and mark from the centre 8 holes at a distance of 1 cm apart as shown. Use a sharp Bic – Biro pen to make 8 holes on either side from the centre. Mark the holes as shown below.



- One optical pin.
- One cork
- A stop watch or stop clock
- One retort stand
- a 30cm ruler.

## QUESTION 2

### PART A

- A micrometer screw gauge ( to be shared)
- A voltmeter ( 0- 3 or 0-5 W)
- Ammeter ( 0- 1A)
- Microme wire SWG 28 ( d = 0.35 mm) mounted on a mm. Scale with the ends labeled AB.
- A switch
- A jockey / A connecting with a of approx 50 cm Length having a crocodile clip attached to one end.
- One new dry cell
- At least eight connecting wires with clips attached to one end.

### PART B

- One metre rule
- A lens holder.
- A candle
- A white screen.
- A convex lens f.l 10cm