

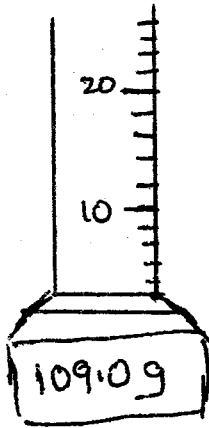
**GATITU SECONDARY SCHOOL, P.O. BOX 327 – 01030, GATUNDU.**

**FORM 4 PHYSICS. TUNE UP EXAMINATION. TERM 2 2015.**

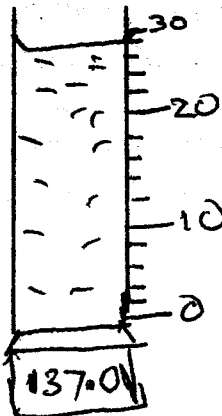
NAME: \_\_\_\_\_ CLASS: \_\_\_\_\_ ADM: \_\_\_\_\_

1. A thin wire was wound 30 times closely over a boiling tube. The total length of the windings was found to be 9.3mm. Calculate the radius of the tube. (3mks)

2. In an experiment to determine the density of a liquid, the readings shown in the diagram below were noted.

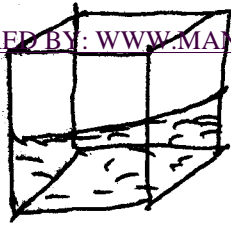


Calculate the density of the liquid.



(3mks)

3. The figure below shows a square container with a square base of side 5cm, carrying water to a height of 7cm.



When pebble is immersed into the water, the level rises to 10cm. Determine the volume of the pebble. (3mks)

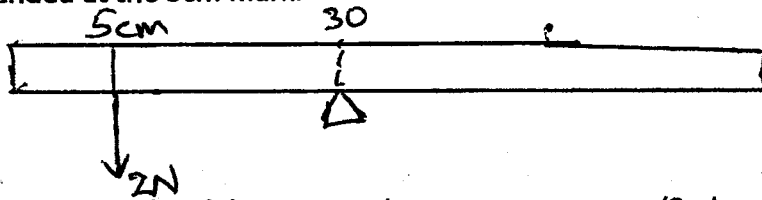
4. A sphere of diameter 6.0cm is moulded into a thin uniform wire of diameter 0.2mm. Calculate the length of the wire in metres. (3mks)

5. The centripetal force needed to make an object describe a circular path depends on three main factors. Name them. (3mks)

b) A satellite moves round the earth in a circular orbit of radius  $8 \times 10^3$  km and takes 84 minutes to revolve around ~~the~~ once. Calculate the centripetal acceleration of the satellite. (3mks)

6. A stopwatch started 0.50 seconds after the start button was pressed. The time recorded using the stopwatch for a ball bearing falling through a liquid was 2.53 seconds. Determine the time of fall. (3mks)

7. Below is a uniform metre rule pivoted at the 30 cm mark. It is balanced by a weight of 2N suspended at the 5cm mark.



Determine the weight of the metre rule.

(3mks)

8. A volleyballer is seen to bend with her legs apart when receiving a ball. Account for her posture. (2mks)

