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

FORM 2 PHYSICS END OF TERM 2 EXAMINATION. TERM 2 2016.

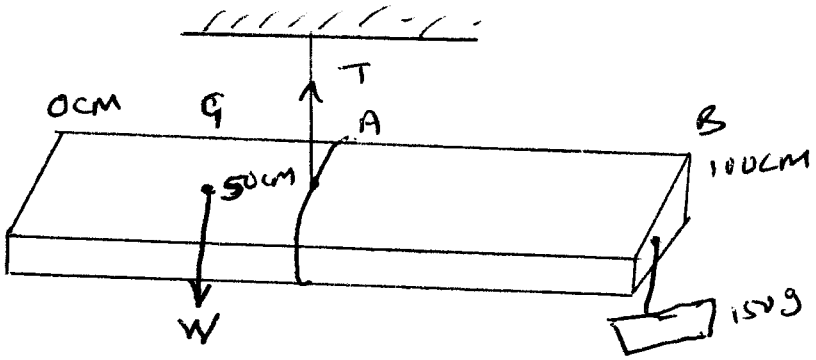
NAME:_____ CLASS:_____ ADM:_____

1. Define Centre of gravity of a body. (1mk

2. A uniform metre rule is balanced at 20cm mark by a mass of 150g placed at one end.

i) Draw a diagram to show the state of balance of the metre rule. (2mks

ii) Determine the weight and hence the mass of the metre rule. (2mks



3. A uniform metre rule of uniform width 2.5cm and thickness 0.5cm is suspended at 80cm mark and kept balanced by hanging a mass of 150g at 100cm mark as shown below.

Calculate:

a) The mass of the metre rule. (4mks

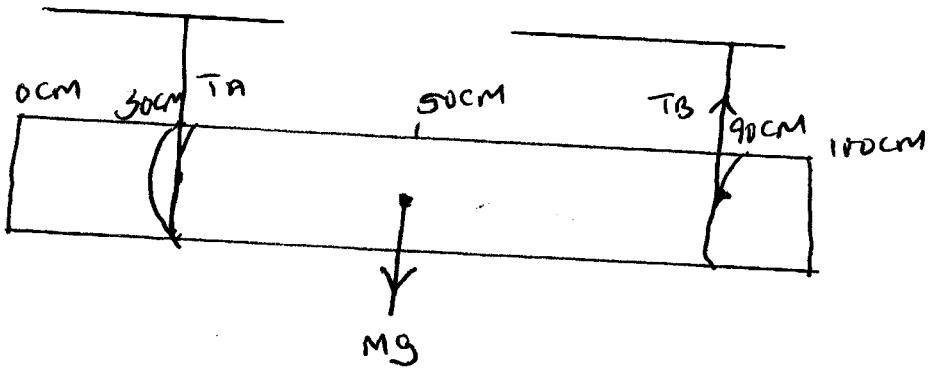
b) The density of the material of the metre rule. (4mks

c) Tension T in the string. (2mks

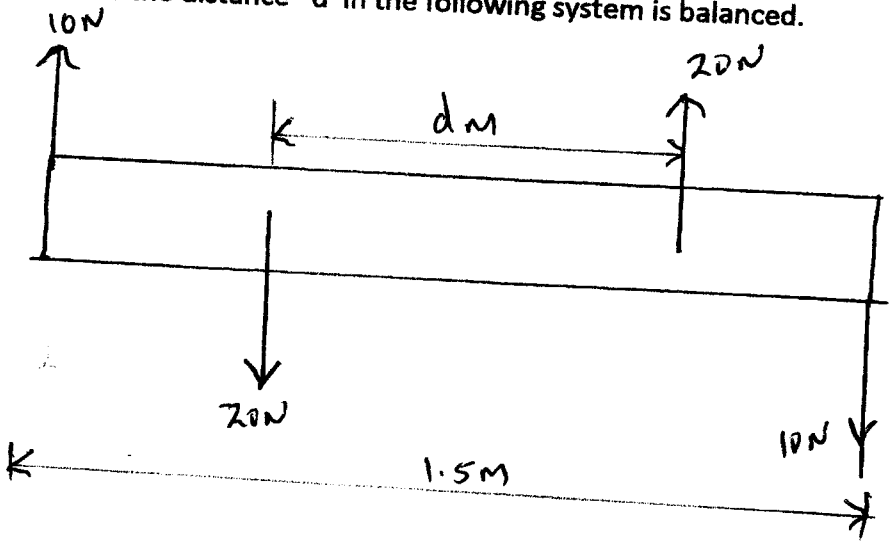
3(i) Define the term moment of a force. (1mk

ii) State Principal of moment. (2mks

iii) Calculate thee tension TA and TB in the system below when a metre rule of mass 100g is balanced at 30cm and 90cm mark. (4mks



4. Calculate the distance d in the following system is balanced. (3mks



5. State 3 applications of couple. (3mks

6. Draw a section of vernier calipers with the following readings. (6mks

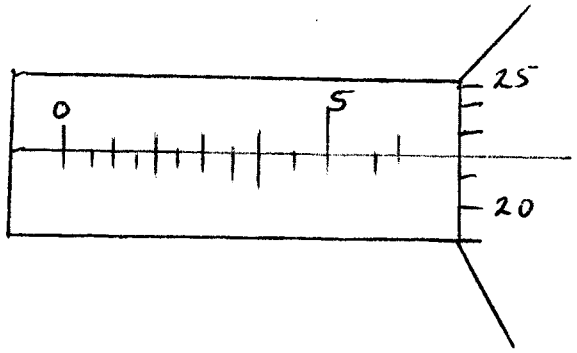
a) 2.05 cm

b) 1.50 cm

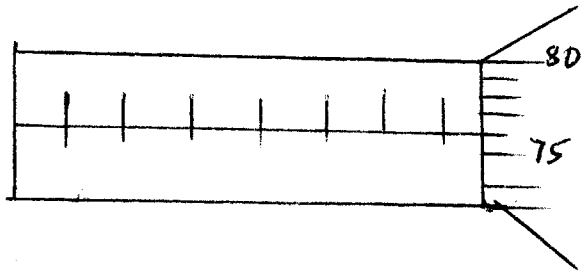
c) 3.00 cm

7. The following are sections of micrometer screw gauges. State the reading in each.

a) (2mks



b) (2mks



8. Write down the appropriate instrument to use in measurement of the following. (6mks

i) Thickness of a telephone cable

ii) Diameter of a thin metal rod.

iii) External and Internal diameter of a beaker.

9. Write the following numbers correct to the indicated accuracy.

a) 0.0462 (2 significant figures) (5mks

b) 1.000643 (2 s.f)

c) 5026 (2 s.f)

d) 8.170 (2. Sf)

e) 60245 (3. Sf)

10. An oil drop of volume $5 \times 10^{-10} m^3$ forms a circular film of radius 0.1m. Calculate the thickness of the film in mm. State the assumption made. (4mks

11. An oil drop forms a circular patch of arca $5 \times 10^{-3}\ m^2$. If the oil drop has a volume of $9 \times 10^{-12}\ m^3$. Estimate the diameter of the oil molecules. (4mks

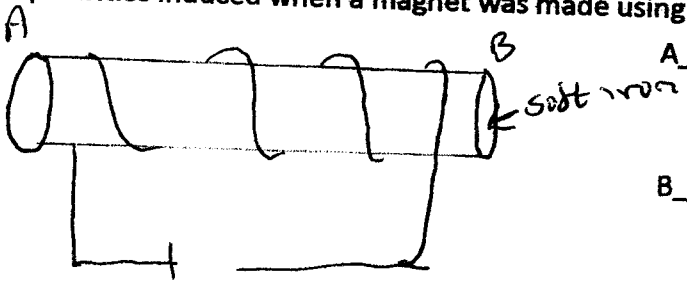
12(i) Name two properties of a magnet. (2mks

ii) State basic law of magnetism. (1mk

iii) State 3 methods of making magnets. (3mks

iv) Differentiate with suitable examples between hard and soft magnetic materials. (4mks

v) Name the polarities induced when a magnet was made using electrical method. (2mks

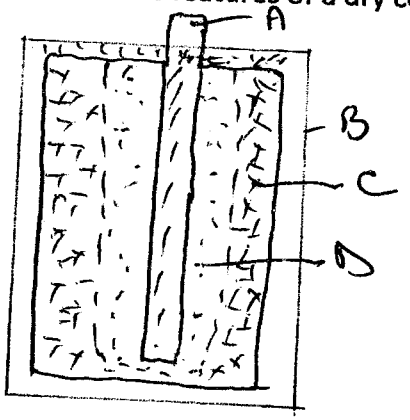


A_____

B_____

vi) State 4 appications of magnets. (4mks

13. The figure below shows features of a dry cell. (4mks



14. Explain the meaning of polarization in a simple cell. How can it be minimized. (3mks