PHYSICS

FORM ONE

TIME 2 HRS

NAME………………………………………….ADM…………………..CLASS……………

1. a) Define masses and state its SI units. (2mks)

   b)Name the instruments used to measure mass. (4mks?)

2. Distinguish between a basic physical quantity and a derived physical quantity giving an example of each case. (3mks)
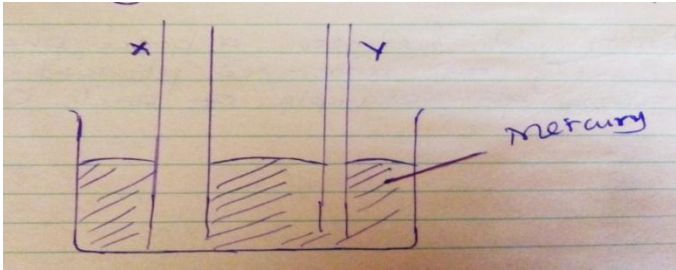
3. a) Define force and state its SI unit. (2mks)

   b) State three effects of force when subject to an objects. (3mks)

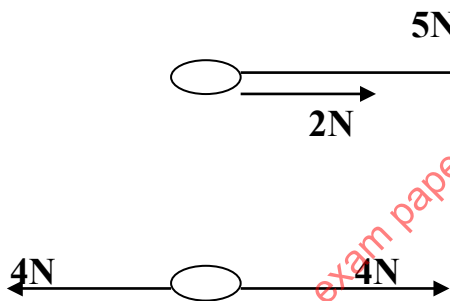   c) List any three types of forces. (3mks)

d) Indicator on the diagram below, the level of the mercury in the tubes x ND Y

4. a) Differentiate between scalar and vector quantity. (2mks)

b) Give the resultant in each case.(4mks)

5N

2N

4N   4N

5. a) Define pressure and state its SI unit. (2mks)

b) A brick 210cm long, 10cm wide and 5cm thick has a mass of 500g. Determine the
   i.   Greatest pressure that can be exerted by the brick on a flat surface. (2mks)

ii.   Least pressure that can be exerted by the brick on a flat surface.(3mnks)
(Take g=10N/KG)

6. a) State any four differences between mass and weight.(4mks)

b) A man has a mass of 70kg. Calculate:

i.   His weight on earth, where the gravitational field strength is 10N/KG. (2mks)

ii.   His weight on the moon, where the gravitational field strength is 1.7N/kg.(2mks)

7. a) A sphere of diameter 6.0cm is molded into a thin uniform wire of diameter 0.2mm. Calculate the length of the wire in meters. (take pie =3.14)

b) Find the volume of a triangular prism whose base is 6.0cm, height is 5.0 cm and length is 12.0cm.(3mks)

8. The diagram below shows a sketch of the map of Kenya, which is not drawn to scale. If the area of small square is 2.0cm2. Calculate the area of the map. (5mks)

9. Laboratory is a special room where the practical is done and where they store apparatus. State 6 safety rules that one must observe. (6mks)

10. Convert each of the following in as indicated.
    i.   10 tones into kg

    ii.   256g into kg

    iii.   1.25g into mg

11. a)Define time and state its SI units. (2mks)

    b)Convert the following
    i.   24hrs into minutes

    ii.   360 seconds into hours

12. a) Define physics. (2mks)
    b) State and explain any two branches of physics.