FORM 1 TERM 1 2021

PHYSICS

1. The level of water in a burette is 27cm^3. If 88 drops of water fall from the burette and the average volume of one drop is 0.25cm^3, what is the final water level in the burette? (2mks)

2. 100cm^3 of sea water of density 1150kg/m^3 is mixed with 100cm^3 of fresh water of density 1000kg/m^3. Determine the density of the mixture. (3mks)

3. A density bottle has a mass of 17.5g when empty when full of water, its mass is 37.5g when full of liquid X; its mass is 35g. If the density of water is 1000kg/m^3. Find the density of liquid X. (4mks)

4. An object weighs 1000N on earth. On the moon's surface the weight of the object is 166.7N. Determine;
   i. Its mass on earth. (2mks)

   ii. The moons gravitational field strength. (2mks)

5. What is surface tension? (1mk)

The figure below shows a funnel dipped in a soap solution. (2mks)

Funnel

Soap solution
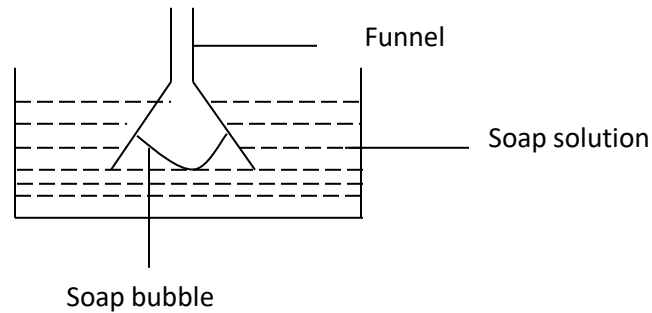
Soap bubble

ii. Explain what happens to the soap bubble when the funnel is removed.
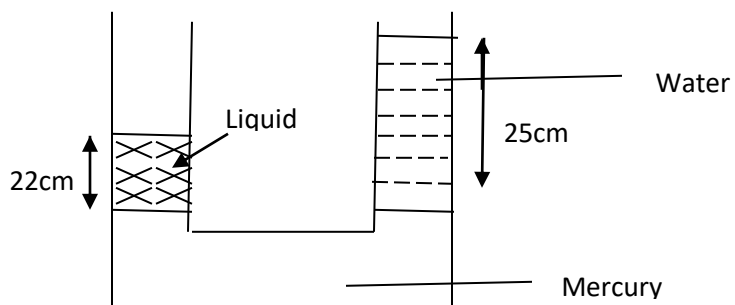
6. State four differences between mass and weight. (4mks)

7. Heavy commercial vehicles have many wheels. Explain. (2mks)

8. The figure below shows a u-tube filled with water, mercury and another liquid.

Liquid

Water

25cm

22cm

Mercury

a. Determine the density of the liquid. (3mks)

b. State a possible reason why mercury is used. (1mk)

9. State the kinetic theory of matter. (1mk)

10. In terms of cohesive forces and inter-particle distances of particles in matter, distinguish between the three states of matter. (3mks)