ECOLE DES SCIENCES DE MUSANZE

REVISON QUESTIONS OF PHYSICS FOR S1

Q1. What is a scientific investigation?

Q2. Discuss the meanings of the following terms:

(a) Prediction

(b) Interpretation of result

(c) Data analysis

(d) Decision making

Q3.a) Define the following terms: i) Acceleration ii) Thermodynamics

b) Express the following in millimeters: i) 26.9 cm ii) 356 µm.

Q4. a) Give and explain 3 types of contact forces.

b) Give and explain 3 types of non-contact forces.

Q5.a) State 4 laboratory safety rules and regulations.

b) State 4 careers opportunities that physics opens for you

Q6. a) Differentiate velocity from speed

b) Differentiate distance from displacement

Q7.a) State the 4 effects of forces

b) Distinguish between mass and weight.

Q8.a) A car increases its speed steadily from 8m/s to 30m/s in 10s.How far does is it travel this time?

Q9. An aquarium measuring 1 m by 0.8 m by 0.5 m is filled with water of density 1000 kg/m^3. Calculate the mass of water contained in the aquarium.

Q10.Name all the forces acting on the following:

i) A book resting on a table.

ii) A book which is being pushed across a flat rough table by a student's finger.

iii) A stone resting on a rough sloping board.

Q11. Explain the advantages of using a vernier calliper over a metre rule in measuring the diameter of a small ball bearing.

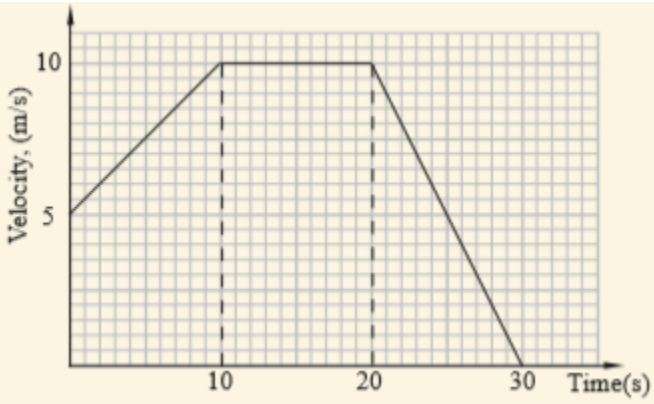
Q12. A beaker of radius 5 cm contains water to a height of 10 cm.
(a) What is the volume of the water in the beaker?
(b) When a stone is completely immersed in the beaker, water rises to a height of 19 cm. What is the volume of the stone?

Q13. A Eureka can of cross sectional area 60 cm2 is filled with water to a height of 10 cm. A piece of steel is lowered carefully into the can as shown in Fig. 1.40 then removed. If the height of the water dropped to 7 cm, after overflowing, determine the volume of steel metal.

Q14. What is the mass of air in a room measuring 5 m × 10 m × 10 m? (Take the density of air to be 1.293 kg/m3).

Q15. Iragena and Hakizimana were discussing about velocity in their Physics class before presenting their findings to the whole class. Which of the following is correct about uniform velocity.
A. the rate of change of acceleration with time is constant.
B. the rate of change of displacement with time is constant.
C. the rate of change of velocity with time is constant.
D. the rate of change of distance with time is constant

Q16. The figure below represents the velocity-time graph of a body during a period of 30 s.



(a) Use the equations of motion to find the displacement of the body in 30 s.
(b) Use the graph to determine the displacement of the body in 30 s.
(c) What is the retardation of the body?

Q17. Uwase threw a ball vertically upwards while playing in the school field.

Sketch: (a) a speed-time graph for the motion of the ball.

(b) a velocity-time graph for the motion of the ball.