PRESIDENT'S OFFICE

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

GEITA ADVENTIST SECONDARY SCHOOL

FORM TWO HOLLIDAY PACKAGE 27TH APRIL 2020

PHYSICS

1. Fin the speed of a train if its displacement is 15m and takes 3seconds for the journey.
2. A car started at rest to move for a distance of 4m and finished its travel with 12m/s. find the time taken by the car.
3. A stone is released from the top of a tower of height 19.6m. calculate its final velocity just before touching the ground.
4. To estimate the height of a bridge over a river, a stone is dropped from the bridge. It takes 3 seconds to touch the surface of water. Calculate the height of the bridge and the velocity with which it hits the surface of water. (take $g=9.8ms^{-2}$)
5. A stone is projected vertically upward, takes 2.5 seconds to reach the highest point. Calculate:
   i. The initial velocity of the stone
   ii. The maximum height attained by the stone.

6. A petrol container has a mass of 15kg when empty and 105kg when full of petrol. What will be its mass when full of water? (density of petrol $=720kg/m^3$).

7. A uniform metre rule is balanced horizontally on a knife edge placed 5cm from B with a mass of 60g at B. Find the mass of the ruler.

8. A rectangular log of wood of density $200kg/m^3$has dimension 0.3m×0.5m×6.0m.

a. calculate the maximum pressure it can exert on the ground.

b. calculate the minimum pressure it can exert on the ground.

9. A ball of a mass 200g is dropped from a height of 20m and on impact with the ground it loses 30J of energy. calculate the height which it reaches on the ground ($g=10m/s^2$).

10. A piece of metal weighs 9.25g in air,8.20g in water and 8.36g when immersed in kerosene?

(a) What is the density of a metal?

(b) What is the density of kerosene?

"IT IS ONLY FOR SWIMMERS"