STD: VII PHYSICS **Time: 1½ Hours**

Marks: 80

(10 Marks)

I.   **Fill in the blanks**

1. 1 gram- force = _____ dyne.
2. _____ works on the principle that two bodies of equal masses would secure a balance.
3. The SI unit of weight is _____.
4. The value of weight on the _____ is one-sixth than that of the earth.
5. An object _____ in a liquid of less density than its own.
6. If an object moves in a line, straight or curved, its motion is said to be _____.
7. _____ motions are not periodic while ---------- motions are repetitive.
8. Car taking a turn in a formula one race is an example for _____ motion.
9. _____ = $\dfrac{1}{\text{Time period}}$

II. **State whether the following statements are 'True' or 'false' and also correct the wrong statements. (10 Marks).**

1. Time period of a pendulum depends on the effective length of the pendulum.

2. Spinning of a top is an example for a revolutionary motion.

3. Quantities which do not have directions but magnitude only are called vector quantities.

4. Weight of a body is more in equatorial regions.

5. The density of mercury is 1 g cm^{-3}.

III. **Convert the following(10 Marks)**

1. 2 g cm^{-3} to kg m^{-3}
2. 8000 kg m^{-3} to g cm^{-3}
3. 90 km h^{-1} to m s^{-1}
4. 50 m s^{-1} to km h^{-1}
5. 6 gf to dynes

IV. **Define the following (10 Marks)**

1. Plimsoll line   2. One- kilogram force   3. Relative Density   4. Frequency

5. Retardation

V. Differentiate the following:(10 Marks)

  1. Weight and mass 2. Distance and displacement 3. Speed and velocity

  4. Periodic and repetitive motion 5. Rotational and revolutionary motion

VI. Answer the following questions in 3 or more sentences.(15)

  1. Give a short note on relative density bottle. (3)

  2. Explain how convectional currents arise as a result of.variations in density of liquids and gase with temperature (3)

  3. What is a simple pendulum? What type of motion does it have? Define the amplitude of a pendulum. (3)

  4. Rest and motion are relative terms. Justify (3)

  5. What is acceleration? Give its SI unit. What is the acceleration of a body moving with unifor velocity? (3)

VII. Numericals: (15 Marks)

  1. Calculate the relative density of the liquid from the following information.

  Mass of empty relative density =24.5g

  Mass of relative density bottle with water=56.2g

  Mass of relative density bottle filled with liquid=51.2g

  2. The density of gold is 19 g cm^{-3}. Find the

  a) Volume of 57 g of gold b) Volume of 114 g of gold

  3. A body moves 5m towards north, then 6m towards east and finally 5m towards south. Calculate

  a) distance covered b) displacement of the body

  4. If a car covers a distance of 500 km in 5 hours and 100 km in next 2 hours. Find its average speed in m/s.

  5. A vehicle moves 45 km in 30 min. Calculate its velocity in a) Km h^{-1} b) m s^{-1}

****