

## CBSE TEST PAPER-02

### CLASS - XI PHYSICS (Physical World & Measurement)

#### Topic: - Physical World & Measurement

1. What is the difference between  $A^\circ$  and A.U.? [1]
  2. Define S.I. unit of solid angle? [1]
  3. Name physical quantities whose units are electron volt and pascal? [1]
  4. When a planet X is at a distance of 824.7 million kilometers from earth its angular diameter is measured to be  $35.72^{11}$  of arc. Calculate the diameter of 'X'. [2]
  5. A radar signal is beamed towards a planet from the earth and its echo is received seven minutes later. Calculate the velocity of the signal, if the distance between the planet and the earth is  $6.3 \times 10^{10} \text{m}$ ? [2]
  6. Give two methods for measuring time intervals? [2]
  7. Find the dimensions of latent heat and specific heat? [2]
  8. in Vander Waal's equation  $\left(\frac{P+a}{V^2}\right)(V-b)=RT$  [2]
  9. E, m, l and G denote energy, mass, angular momentum and gravitational constant respectively. Determine the dimensions of  $EL^2 / m^5 G^2$  [2]
  10. (a) State which of the following are dimensionally current [3]
    - (i) Pressure = Energy per unit volume
    - (ii) Pressure = Momentum  $\times$  volume  $\times$  time
- (b) The density of cylindrical rod was measured by the formula:-  $P = \frac{4m}{\pi D^2 l}$
- The percentage in m, D and l are 1%, 1.5% and 0.5%. Calculate the % error in the calculated value of density?