PHYSICS   PAPER-I   (OLD SCHEME)   TIME ALLOWED: 20 Minutes

GROUP-I   **OBJECTIVE**   MAXIMUM MARKS: 17

Note: **You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled.   Do not solve question on this sheet of OBJECTIVE PAPER.**

Q.No.1

(1)   The number 0.0023 in scientific notation can be expressed as:-

(A) 23×10^{-4} (B) 0.23×10^{-2} (C) 2.3×10^{-3} (D) 23×10^{4}

(2)   The SI unit of coefficient of viscosity is:-

(A) $Kg\,m^{-2}s^{-1}$ (B) $Kg\,m^{-1}s^{-1}$ (C) $Kg\,m^{-1}s^{-2}$ (D) $Kg\,ms$

(3)   The magnitude of the resultant of two forces is F. The magnitude of each force is also F.

The angle between the forces must be:-   (A) 60° (B) 90° (C) 120° (D) 180°

(4)   Tick the correct relation.

(A) $\hat{i} \times \hat{j} = -\hat{k}$ (B) $\hat{i} \times \hat{j} = 0$ (C) $\hat{j} \times \hat{i} = \hat{k}$ (D) $\hat{i} \times \hat{j} = \hat{k}$

(5)   At highest point, the vertical component of velocity of projectile becomes:-

(A) Maximum   (B) Zero   (C) Minimum   (D) $Vi\,Cos\,\theta$

(6)   1 Kilowatt hour is equal to:-

(A) $3.6 \times 10^{6}\,J$ (B) $3.6\,M\,J$ (C) $36 \times 10^{5}\,J$ (D) All of these

(7)   Moment of inertia I is given by:-

(A) $m\,r$ (B) $m\,r^{2}$ (C) $m^{2}\,r^{2}$ (D) $m\,r^{3}$

(8)   Angular acceleration is produced by:-

(A) Power   (B) Torque   (C) Pressure   (D) Force

(9)   When droplet has terminal velocity, the acceleration is:-

(A) Zero   (B) Variable   (C) $980\,cm\,s^{-2}$ (D) $9.8\,m\,s^{-2}$

(10)   Total energy of a Particle executing SHM at any displacement x is given by:-

(A) $K\,x$ (B) $\dfrac{1}{2}K\,x$ (C) $\dfrac{1}{2}K\,x_{0}^{2}$ (D) $K\,x_{0}^{2}$

(11)   Velocity of sound is independent of:-

(A) Temperature   (B) Density   (C) Medium   (D) Pressure

(12)   The distance between two adjacent nodes and antinodes is:-   (A) $\dfrac{\lambda}{4}$ (B) $\dfrac{\lambda}{2}$ (C) λ (D) 2λ

(13)   Polarization of light proves that light waves are:-   (A) Electromagnetic waves

(B) Longitudinal waves   (C) Transverse waves   (D) Very fast moving waves

(14)   Newton's rings are formed due to:-

(A) Diffraction   (B) Polarization   (C) Interference   (D) Resonance

(15)   The unit of power of a lens is:-   (A) Metre   (B) Watt   (C) Newton   (D) Diopter

(16)   Efficiency of Carnot Engine depends on the:-

(A) Difference in temperature of hot and cold reservoir   (B) Nature of working substance

(C) Temperature of hot reservoir   (D) Temperature of cold reservoir

(17)   The equation $W = -\Delta\mu$ represents:-

(A) Isothermal Process   (B) Adiabatic Process   (C) Isobaric Process   (D) Isochoric Process