Paper Code Number: 6477	2015 (A)	Roll No._____

INTERMEDIATE PART-I (11th CLASS)

PHYSICS PAPER-I (NEW 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 K.E. of bullet of mass 500 gm moving at a speed of $200\,ms^{-1}$ is:-

(A) $250\,J$ (B) $125\,J$ (C) $2500\,J$ (D) $10{,}000\,J$

(2) The diver spins faster when moment of inertia becomes:-

(A) Smaller (B) Greater (C) Constant (D) Equal

(3) When a body moves in a circle, the angle between linear velocity $\vec{v}$ and angular velocity $\vec{w}$ is:-

(A) 180^o (B) 90^o (C) 60^o (D) 45^o

(4) The speed of hoop at the bottom of inclined plane is:-

(A) $\sqrt{gh}$ (B) $\sqrt{2gh}$ (C) $\sqrt{\frac{4}{3}gh}$ (D) $\sqrt{\frac{3}{4}gh}$

(5) One torr in Nm^{-2} is expressed as:-

(A) $130.5\,Nm^{-2}$ (B) $133.5\,Nm^{-2}$ (C) $140.2\,Nm^{-2}$ (D) $135.3\,Nm^{-2}$

(6) When a particle is moving along a circular path, its projection along the diameter performs:-

(A) SHM. (B) Vibratory motion (C) Linear motion (D) Rotatory motion

(7) On loading the prong of a tuning fork with wax, the frequency of sound:-

(A) Increases (B) Decreases (C) Remains same (D) First increases then decreases

(8) The wavelength of fundamental mode of vibration of an open end pipe is:-

(A) 4ℓ (B) 2ℓ (C) ℓ (D) $\frac{1}{4}\ell$

(9) Two tuning forks of frequencies 260 Hz and 256 Hz are sounded together, the number of beats per second is:- (A) 4 (B) 258 (C) 2 (D) 516

(10) The blue colour of sky is due to:-

(A) Diffraction (B) Reflection (C) Polarisation (D) Scattering

(11) In Michelson's experiment, the angle subtended by a side of eight sided mirror at the centre is:-

(A) $\pi/8$ (B) $\pi/4$ (C) $\pi/2$ (D) π

(12) Pascal is the unit of:- (A) Pressure (B) Force (C) Tension (D) Weight

(13) The efficiency of heat engine whose sink is at $17^o C$ and source at $200^o C$ is:-

(A) 35 % (B) 65 % (C) 80 % (D) 90 %

(14) Solid angle subtended at the centre of sphere of radius $'r'$ in steradian is:-

(A) 2π (B) 4π (C) 6π (D) 8π

(15) $\hat{i}\,.\left(\hat{j}\times\hat{k}\right)$ is equal to:-

(A) 1 (B) 2 (C) 0 (D) $\hat{k}$

(16) The range of projectile is same for the angle of projection of:-

(A) 30^o & 45^o (B) 50^o & 30^o (C) 20^o & 60^o (D) 30^o & 60^o

(17) The distance covered by free falling body in two seconds is:-

(A) $9.8\,m$ (B) $19.6\,m$ (C) $44.4\,m$ (D) $49\,m$