

PAPER CODE = 6474

Note : Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

1-1	A body completes five revolutions in a circular path having radius 5 cm, the displacement of the body is : (A) Zero (B) 10 cm (C) 0.157 rad (D) 0.314 rad			
2	How many satellites can track your Switch ON mobile phone location globally : (A) 3 (B) 24 (C) 14 (D) 5			
3	Longitudinal waves do not exhibit : (A) Refraction (B) Reflection (C) Polarization (D) Diffraction			
4	The unit of thermodynamic scale is : (A) Centigrade (B) Fahrenheit (C) Joule (D) Kelvin			
5	The dimensions of $\frac{v}{v-u_s} \frac{1}{\lambda}$ are : (A) $[T]^{-1}$ (B) $[L]^{-1}$ (C) $[MT^{-1}]$ (D) $[T^{-1}L]$			
6	The speed of sound in air at 373 K is : (A) $332\ ms^{-1}$ (B) $300\ ms^{-1}$ (C) $291\ ms^{-1}$ (D) $393\ ms^{-1}$			
7	The resultant force of two forces 30 N and 50 N acting on a body in opposite direction is : (A) 80 N (B) $10\sqrt{34}$ N (C) 50 N (D) 20 N			
8	When the bob of simple pendulum is at its extreme position, it has : (A) K.E (B) P.E and K.E (C) P.E (D) P.E or K.E			
9	At constant temperature, the graph between v and $\frac{1}{p}$ is : (A) Hyperbola (B) Straight line (C) Parabola (D) Ellipse			
10	All the food we eat in one day has about the same energy as (if one litre petrol energy = 5×10^7 J) : (A) 5×10^7 J (B) 0.33 J (C) 10×10^7 J (D) 1.66×10^7 J			
11	The diameter of the milky way is of the order of : (A) $10^{20}m$ (B) $10^{10}m$ (C) 10^3m (D) $10^{40}m$			
12	The angular speed of hour's hand of mechanical watch at 2 o'clock is : (A) $\frac{\pi}{3}$ rad /hour (B) 2π rad /hour (C) $\frac{\pi}{6}$ rad /hour (D) 4π rad /hour			
13	The time of flight of projectile is maximum when it is projected at an angle of : (A) 45° (B) 90° (C) 76° (D) 0°			
14	A two meter high tank is full of water. A hole appears at its middle. What is the speed of efflux of water (If $g = 10\ ms^{-2}$) : (A) $4.47\ ms^{-1}$ (B) $4.32\ ms^{-1}$ (C) $10.0\ ms^{-1}$ (D) $20.0\ ms^{-1}$			
15	Name the quantity which is vector : (A) Density (B) Power (C) Impulse (D) Charge			
16	Twenty waves passes through the medium in one second with speed $20\ ms^{-1}$, the frequency of wave is : (A) 400 Hz (B) 20 Hz (C) 50 Hz (D) 2 Hz			
17	The magnification of a simple microscope when the final image is formed at infinity : (A) $\frac{d}{f}$ (B) $1 + \frac{d}{f}$ (C) $f_o + f_e$ (D) $\frac{f_o}{f_e}$			