

Inter (Part-I) 2017

Physics	Group-II	PAPER: I
Time: 20 Minutes	(OBJECTIVE TYPE)	Marks: 17

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- The profile of periodic waves generated by a source executing S.H.M. is represented by a:

- (a) Circle (b) Sine curve ✓
(c) Tangent curve (d) Cosine curve

2- According to Hygen's principle, each point on a wave front acts as a source of:

- (a) Secondary wavelet ✓
(b) Primary wavelet
(c) New wave front
(d) Sound

3- In the absence of external force, the change in momentum is:

- (a) Zero ✓ (b) Constant
(c) Decreasing (d) Increasing

4- If the speed of light in vacuum is C , then its velocity in a medium of refractive index 1.3 is:

- (a) $1.3 C$ (b) $\frac{1.3}{C}$
(c) $\frac{C}{1.3}$ ✓ (d) C

- 5- A body rotating with angular velocity of 2 radian / s and linear velocity is also 2 ms^{-1} , then radius of circle is:
- (a) 1 m ✓ (b) 0.5 m
(c) 4 m (d) 2 m
- 6- The change in internal energy is defined as:
- (a) $Q - W$ ✓ (b) $Q - T$
(c) $Q + P$ (d) $Q - P$
- 7- S.I unit of angular displacement is:
- (a) Radian ✓ (b) Degree
(c) Revolution (d) Minute
- 8- The resultant of 120 N and 20 N forces cannot be:
- (a) 141 N ✓ (b) 100 N
(c) 101 N (d) 130 N
- 9- Beats cannot be recognized if difference of frequencies of two sounds is:
- (a) Less than 10 Hz (b) More than 10 Hz ✓
(c) Less than 5 Hz (d) Less than 7 Hz
- 10- When a transverse wave is incident on rarer medium from a denser medium, the phase change will be:
- (a) 90° (b) 60°
(c) 180° (d) 0° ✓
- 11- Density of blood is nearly equal to that of:
- (a) Water ✓ (b) Iron
(c) Milk (d) Glycerin
- 12- Height of projectile is maximum at an angle of:
- (a) 45° (b) 60°
(c) 30° (d) 90° ✓

13- Direction of angular acceleration is always along:

- (a) x-axis (b) y-axis
(c) z-axis (d) The axis of rotation ✓

14- Which one is non-renewable source of energy:

- (a) Wind (b) Biomass
(c) Coal ✓ (d) Sunlight

15- Total energy of a particle executing S.H.M. is:

- (a) $\frac{1}{2} kx^2$ (b) $\frac{1}{2} k (x_0^2 - x^2)$
(c) $\frac{1}{2} kx_0^2$ ✓ (d) $\frac{1}{2} k (x^2 - x_0^2)$

16- For an ideal gas, the potential energy associated with its molecules is:

- (a) Maximum (b) Zero ✓
(c) $\frac{1}{2} kx_0^2$ (d) $\frac{1}{2} kx_0$

17- Significant figures in 0.0004813 are:

- (a) 8 (b) 7
(c) 4 ✓ (d) 3

