Inter (Part-I) 2018

Physics	Group-I	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 distance covered by a body in time 't' starting from rest is:

(a) at^2

(b) $2at^2$

(c) $\frac{1}{2} at^2$ ✓

(d) $\frac{1}{2} a^2 t$

2- The fluid is said to be incompressible, if its density is:

(a) Zero

(b) Very high

(c) Very small

(d) Constant ✓

3- The blue colour of sky is due to:

(a) Diffraction of light

(b) Reflection of light

(c) Polarization of light ✓

(d) Scattering of light

4- The work done in isochoric process is:

(a) Constant

(b) Variable

(c) Zero ✓

(d) Depend on condition

5- Physical quantity "pressure" in term of base unit is:

(a) $Kg^{-1} ms^{-2}$

(b) $Kg^2 ms^{-3}$

(c) $Kg^2 m^{-2} sec$

(d) $Kg\, m^{-1}s^{-2}$ ✓

6- If a stretched string is 4 m and it has 4 loops of stationary waves, then wavelength is:

(a) 1 m (b) 2 m √

(c) 3 m (d) 4 m

7- The magnitude of a vector $\vec{r} = 3\hat{i} + 6\hat{j} + 2\hat{k}$ is:

(a) −1 (b) −7

(c) 7 √ (d) 8

8- When one end of organ pipe is closed, then the frequency of stationary waves of any harmonic in it is given by:

(a) $f_n = \dfrac{nv}{2l}$ (b) $f_n = \dfrac{nl}{4v}$

(c) $f_n = \dfrac{4v}{nl}$ (d) $f_n = \dfrac{nv}{4l}$ √

9- When hot and cold water are mixed, the entropy:

(a) Decreases (b) Increases √

(c) Remains constant (d) Zero

10- The relation between the speed of disc and hoop can be written as:

(a) $V_{disc} = \sqrt{\dfrac{3}{4}} V_{hoop}$ (b) $V_{disc} = \sqrt{\dfrac{4}{3}} V_{hoop}$ √

(c) $V_{disc} = V_{hoop}$ (d) $V_{disc} = \dfrac{1}{2} V_{hoop}$

11- A precise measurement is the one which has:

(a) Greater precision (b) Less precision √

(c) Medium precision (d) More % error

12- As we go from pole to equator of earth, the value of 'g' :

(a) Increases (b) Decreases √

(c) Remains constant (d) Zero

13- Work has the dimensions as that of:
   (a) Momentum   (b) Power
   (c) Torque ✓   (d) Force

14- The component of the weight which balances the tension in pendulum is:
   (a) mg cos θ ✓   (b) mg sin θ
   (c) mg tan θ   (d) −mg sin θ

15- Maximum number of components of a vector may be:
   (a) One   (b) Two
   (c) Three   (d) Infinite ✓

16- If red light is used as compared to blue light, then fringe spacing:
   (a) Increases ✓   (b) Decreases
   (c) Remains same   (d) Becomes zero

17- Repeaters are placed in new system at distance of:
   (a) 30 km   (b) 50 km
   (c) 80 km   (d) 100 km ✓