

Physics (Objective)**(For All Sessions)****(Group-I)****Time: 20 Minutes****Marks : 17**

Note: Write Answers to the Questions on the objective answer sheet provided. Four possible answers A, B, C and D to each question are given. Which answer you consider correct, fill the corresponding circle A, B, C or D given in front of each question with Marker or Pen ink on the answer sheet provided.

- 1.1. The example of mechanical waves is:
 - (A) Water waves
 - (B) Radio waves
 - (C) Infrared waves
 - (D) Ultraviolet waves
2. Sound waves cannot travel through:
 - (A) Water
 - (B) Air
 - (C) Material medium
 - (D) Vacuum
3. Light is polarized by using:
 - (A) Sodium chloride
 - (B) Optical fiber
 - (C) Dichroic substance
 - (D) Plane glass
4. It becomes possible to send light to inaccessible place due to:
 - (A) Coaxial cable
 - (B) Optical fiber
 - (C) Copper wire
 - (D) Glass wire
5. When hot and cold water are mixed, the entropy:
 - (A) Decreases
 - (B) Increases
 - (C) Remains constant
 - (D) Is zero
6. Force acting on the piston to move outward is:
 - (A) Intake stroke
 - (B) Compressive stroke
 - (C) Power stroke
 - (D) Exhaust stroke
7. The number of significant figures in 0.00232 is:
 - (A) 3
 - (B) 4
 - (C) 5
 - (D) 6
8. Number of colours used in process of colour printing to produce the entire range of colours are:
 - (A) 7
 - (B) 8
 - (C) 5
 - (D) 4
9. If $A_x = A_y$, then the angle between $\vec{A}$ and x -axis is:
 - (A) 30°
 - (B) 45°
 - (C) 60°
 - (D) 90°
10. If $\vec{A}$ has components A_x and A_y , the magnitude of A is given by:
 - (A) $A - A_y$
 - (B) $(A - A_y)^{-\frac{1}{2}}$
 - (C) $(A - A_y)^{\frac{1}{2}}$
 - (D) $(A^2 - A_y^2)^{\frac{1}{2}}$
11. When average velocity becomes equal to instantaneous velocity then body is said to be called moving with:
 - (A) Instantaneous acceleration
 - (B) Variable acceleration
 - (C) Uniform velocity
 - (D) Variable velocity
12. The velocity time graph is parallel to the time axis, the acceleration of the moving body is:
 - (A) Positive
 - (B) Negative
 - (C) Maximum
 - (D) Zero
13. A body of mass 2kg moving with velocity 4 m s^{-1} has K.E equal to:
 - (A) 16 J
 - (B) 8 J
 - (C) 2 J
 - (D) 32 J
14. Apparent weight of an object in a lift moving down with acceleration $a = g$ is:
 - (A) $W + ma$
 - (B) Zero
 - (C) W
 - (D) Infinity
15. If radius of earth is increased four times of the present, critical velocity V_o becomes:
 - (A) $V_o/\sqrt{2}$
 - (B) $\sqrt{2} V_o$
 - (C) $2V_o$
 - (D) $V_o/2$
16. Venturimeter is a device used to measure:
 - (A) Density of fluid
 - (B) Speed of fluid
 - (C) Pressure of fluid
 - (D) Viscosity of fluid
17. By increasing the mass of the object four times attached to a spring. Time period will become:
 - (A) Same
 - (B) Twice
 - (C) Three times
 - (D) Four times