



Roll No _____

HSSC-(P-I)-A/2024

Paper Code

6

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(For All Sessions)

Physics (Objective)

(Group-II)

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 location of submarines can be detected by:

- (A) Doppler effect (B) Compton's effect (C) Photoelectric effect (D) Temperature effect

2. The speed of sound is greater in:

- (A) Oxygen (B) Air (C) Water (D) Copper

3. The property of bending of light around obstacles is:

- (A) Reflection (B) Refraction (C) Diffraction (D) Polarization

4. Magnifying power of telescope is:

- (A) $\frac{f_e}{f_o}$ (B) $\frac{f_o}{f_e}$ (C) $f_e f_o$ (D) $\frac{1}{f_e f_o}$

5. $W = -\Delta U$ equation holds for:

- (A) Isothermal (B) Adiabatic (C) Isochoric (D) Isobaric

6. The efficiency of carnot engine depends on:

- (A) Working substance (B) T_1 (C) T_2 (D) T_1 & T_2

7. The number of significant figures in 0.00232 are:

- (A) 6 (B) 5 (C) 4 (D) 3

8. Light year is the unit of:

- (A) Light (B) Distance (C) Time (D) Velocity

9. The relation $\vec{A} + (-\vec{A})$ results the:

- (A) Null vector (B) Parallel vector (C) Unit vector (D) Position vector

10. Unit vector for a vector $\vec{A} = 4\hat{i} + 3\hat{j}$ is:

- (A) $\frac{4\hat{i} + 3\hat{j}}{25}$ (B) $\frac{\sqrt{25}}{\sqrt{4\hat{i} + 3\hat{j}}}$ (C) $\frac{4\hat{i} + 3\hat{j}}{5}$ (D) $\frac{\sqrt{5}}{\sqrt{4\hat{i} + 3\hat{j}}}$

11. The horizontal range of projectile at 30° with horizontal is same as that at an angle of:

- (A) 45° (B) 60° (C) 90° (D) 120°

12. The mass of fuel consumed by a typical rocket to overcome earth's gravity is:

- (A) 10 Kgs^{-1} (B) 100 Kgs^{-1} (C) 10000 Kgs^{-1} (D) 1000 Kgs^{-1}

13. The work is said to be negative if:

- (A) $\theta = 0^\circ$ (B) $\theta = 90^\circ$ (C) $\theta > 90^\circ$ (D) $\theta < 90^\circ$

14. The relation for moment of inertia of sphere is:

- (A) $\frac{2}{5}mr^2$ (B) $\frac{5}{2}mr^2$ (C) $\frac{1}{2}mr^2$ (D) $2mr^2$

15. If $1 \text{ rad} = 57.3^\circ$ then $\frac{1}{2} \text{ rad}$ is:

- (A) 57.3° (B) 28.65° (C) 180° (D) 360°

16. The pressure will be low when the speed of fluid is:

- (A) High (B) Low (C) Zero (D) Constant

17. The acceleration of a body executing SHM depends upon its:

- (A) Time period (B) Amplitude (C) Frequency (D) Displacement