



Roll No. _____ to be filled in by the candidate.

(For all sessions)

Paper Code	6	4	7	1
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Physics (Objective Type)

Time: 20 Minutes

Marks: 17

NOTE: Write answers to the questions on objective answer sheet provided. Four possible answers A,B,C & 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. Mass is highly concentrated form of:

- (A) Inertia (B) Energy (C) Plasma (D) Charge

2. Dimensions of $\sqrt{\frac{g}{r}}$ is same as:

- (A) Angular frequency (B) Force (C) Torque (D) Time period

3. Force of 10N makes an angle of 30° with y-axis, its x-component will be:

- (A) 5N (B) 8.66 (C) $\frac{10}{\sqrt{2}}N$ (D) $10\sqrt{2}N$

4. In which quadrant vector $-2\hat{i} - 3\hat{j}$ lies.

- (A) 1st (B) 2nd (C) 4th (D) 3rd

5. Distance travelled by free falling object in first second is:

- (A) 4.9m (B) 9.8m (C) 19.6m (D) 10m

6. Choice of zero potential energy level is:

- (A) Surface of the Earth (B) at infinity
(C) Just above the surface of the Earth (D) arbitrary

7. 2° is equal to:

- (A) 0.035 rad (B) 0.30 rad (C) 0.35 rad (D) 0.0035 rad

8. Centripetal force is directed along:

- (A) Tangent to circle (B) radius (C) axis of rotation (D) x-axis

9. Terminal velocity of a particle in the fluid depends on:

- (A) Nature of fluid (B) Acceleration of particle (C) Force on particle (D) angular velocity of particle

10. Radar system is an application of:

- (A) Electric effect (B) Doppler's effect (C) Magnetic effect (D) Chemical effect

11. $\sqrt{\frac{\ell}{g}}$ and $\sqrt{\frac{m}{k}}$ has same:

- (A) numerical value (B) units (C) damping (D) time period

12. On loading the prong of tuning fork with wax, the frequency of sound:

- (A) increases (B) decreases (C) remains same (D) periodic increase and decrease

13. Fringe spacing increases if we use:

- (A) lowest order (B) highest order (C) red light (D) blue light

14. Soap film shows colours due to:

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

15. Magnifying power of the lens is 6 then its focal length will be:

- (A) 4 (B) 6 (C) 5 (D) 4.5

16. The SI unit of product of pressure and volume is:

- (A) Watt (B) Joule (C) Pascal (D) N.m

17. Carnot engine cycle consists of:

- (A) Four steps (B) Three steps (C) Single step (D) Two steps