

Time: 20 Minutes

OBJECTIVE

Code : 6471

Marks: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

1. Dimension ratio of angular momentum to linear momentum is
 (A) $[M^0 L^1 T^0]$ (B) $[M^1 L^1 T^1]$ (C) $[ML^2 T^{-1}]$ (D) $[M^{-1} L^{-1} T^{-1}]$
2. Time taken by light from moon to earth is
 (A) 1 min 10 sec (B) 1 min 20 sec (C) 1 min 30 sec (D) 1 min 40 sec
3. The angle of $\vec{A} = A_x \hat{i} - A_y \hat{j}$ with x-axis will be in between
 (A) $0^\circ \rightarrow 90^\circ$ (B) $90^\circ \rightarrow 180^\circ$ (C) $180^\circ \rightarrow 270^\circ$ (D) $270^\circ \rightarrow 360^\circ$
4. $AB \sin \theta \hat{n} \times AB \sin \theta \hat{n}$ is
 (A) $A^2 B^2 \sin^2 \theta$ (B) $A^2 B^2$ (C) $A^2 B^2 \hat{n}$ (D) 0
5. The correct relation between height H and total time of flight T of a projectile is
 (A) $H = \frac{gT^2}{8}$ (B) $H = \frac{8T^2}{g}$ (C) $H = \frac{8g}{T^2}$ (D) $H = \frac{8}{gT^2}$
6. An athlete runs with a speed of 12 ms^{-1} , the longest jump he can undertake is ($g = 10 \text{ ms}^{-2}$)
 (A) 12.2 m (B) 16.2 m (C) 14.4 m (D) 24.4 m
7. Two electrons brought closer together the P.E. of the system will/will be
 (A) zero (B) decrease (C) increase (D) infinity
8. The largest satellite system is managed by countries
 (A) 126 (B) 136 (C) 120 (D) 3
9. If a body is moving counter clockwise then angular displacement is
 (A) minimum (B) zero (C) negative (D) positive
10. The velocity of rain drop attains constant value because of
 (A) surface tension (B) up thrust of air
 (C) viscous force exerted by air (D) air currents
11. The time period of seconds hand of a watch is
 (A) 1 sec (B) 1 min (C) 1 hr (D) 12 hrs
12. Types of waves used in sonar are
 (A) sound waves (B) light waves (C) heat waves (D) water waves
13. Speed of sound in helium gas at S.T.P. is
 (A) 258 m/sec (B) 332 m/sec (C) 972 m/sec (D) 1286 m/sec
14. The fringe spacing increases if we use
 (A) red light (B) blue light (C) yellow light (D) green light
15. In a compound microscope magnification produced by objective and eye piece is 5 cm and 10 cm respectively. Total magnification is
 (A) 5 (B) 15 (C) 10 (D) 50
16. The concept of entropy was introduced by Clausius in
 (A) 1656 (B) 1856 (C) 1756 (D) 1956
17. Average translational K.E. of molecules in a gas at temperature 27°C is
 (A) $8314 \times 10^3 \text{ J}$ (B) $1.38 \times 10^{-23} \text{ J}$ (C) $6.21 \times 10^{-21} \text{ J}$ (D) $8.314 \times 10^{-3} \text{ J}$