

PHYSICS**Intermediate Part-I, Class 11th (1stA 324- IV) Paper: I Group - 1****Time: 20 Minutes****OBJECTIVE****Code : 6477****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. A 2 Kg mass is placed on the floor of an elevator which is moving downward with 4.9 m/s^2 acceleration, the reaction of floor on the mass is
(A) 9.8 N (B) 0 N (C) 4.9 N (D) 14.7 N
2. Which pair of angles gives same range of projectile thrown with velocity v_i
(A) $(20^\circ, 60^\circ)$ (B) $(20^\circ, 40^\circ)$ (C) $(30^\circ, 60^\circ)$ (D) $(30^\circ, 70^\circ)$
3. For circular motion with constant speed v , ω and r are at
(A) 90° with each other (B) 120° with each other
(C) 60° with each other (D) 30° with each other
4. Which of the following is correct
(A) in irreversible process entropy remains constant
(B) in reversible process entropy increases
(C) in reversible process entropy remains constant
(D) in irreversible process entropy decreases
5. To observe one hundred fringes in Michelson's interferometer, the distance travelled by moveable mirror will be minimum in case of _____ light.
(A) Red (B) Green (C) Blue (D) Yellow
6. A body in SHM with amplitude x_0 goes from mean position to $\frac{x_0}{2}$. Its phase is
(A) 30° (B) 45° (C) 60° (D) 90°
7. $\hat{i} \cdot (\hat{j} \times \hat{k}) =$ _____
(A) 0 (B) 1 (C) $\hat{i}$ (D) $\hat{j}$
8. Two masses 2 Kg and 3 Kg are moving towards each other with velocity 3 m/s and 2 m/s. The total momentum of the system is
(A) 12 Ns (B) 0 Ns (C) 13 Ns (D) -12 Ns
9. Mass is a highly concentrated form of _____.
(A) Momentum (B) Inertia (C) Energy (D) Acceleration
10. A spectrometer is not used to
(A) study spectrum of light (B) measure refractive index of material of prism
(C) study polarization of light (D) measure wavelength of light
11. If frequency of stationary waves are increased to higher harmonic which of the following decreases
(A) speed (B) wavelength (C) tension in the string (D) density of string
12. Which is renewable source of energy
(A) Biomass (B) Coal (C) Oil (D) Uranium
13. Heat is transferred slowly to a gas in a cylinder, the piston is pushed up through 4.0 cm at constant pressure of 8000 Nm^{-2} . If cross-sectional area of the piston is 0.10 m^2 , work done by the gas is
(A) 32 J (B) 64 J (C) 16 J (D) 96 J
14. The complete requirement for a body to be in equilibrium are
(A) $\sum \vec{F} = 0$ (B) $\sum \vec{F}_x = 0$ (C) $\sum \tau = 0$ (D) $\sum \vec{F} = 0$ and $\sum \tau = 0$
15. If the percentage uncertainty in the radius of a sphere is 3%, then percentage uncertainty in its area is
(A) 3% (B) 6% (C) 9% (D) 4%
16. Two points in a wave $\frac{\lambda}{4}$ distance apart have phase difference
(A) π (B) $\pi/2$ (C) $\pi/3$ (D) 2π
17. Bernoulli's equation relates to
(A) pressure, speed and height (B) pressure, force and height
(C) force, speed and pressure (D) force, height and speed