

DAE 1st YEAR / COMPUTER INFORMATION TECHNOLOGY

PHY:132 Applied Physics

Model paper 2 Objective Part: A

Time :15 Min

Marks:10

Q.1 CHOOSES AND TICK CORRECT ANSWER.

- 1. The dimension of momentum is
(a) MLT^{-1} (b) MLT^{-2} (c) ML^2T^{-1} (d) ML^3
- 2. Which of the following is a scalar quantity?
(a) Energy (b) Velocity (c) Force (d) Torque
- 3. Force per unit area is called
(a) density (b) viscosity (c) pressure (d) energy
- 4. The unit of angular velocity is
(a) m/sec (b) rad/sec (c) meter (d) radian
- 5. The maximum distance of a vibrating body from mean position is called
(a) time period (b) displacement (c) amplitude (d) frequency
- 6. The change in the pitch of sound caused by the relative motion of either the source of sound or the listener is called
(a) Doppler's Effect (b) Beats (c) Echo (d) Acoustics
- 7. The unit of power of lens is
(a) Watt (b) cm (c) meter (d) diopter
- 8. The central part of the optical fiber is called
(a) cladding (b) core (c) optical center (d) Kevlar
- 9. When an electron goes from higher energy level to lower energy level it
(a) emits light (b) absorbs light (c) does not emit light (d) none of these
- 10. A satellite can cover the area on earth
(a) 25% (b) 30% (c) 35% (d) 40%

DAE 1st YEAR ~~PHYSICS~~ / COMPUTER INFORMATION TECHNOLOGY

PHY:132 Applied Physics

Model paper 2

Subjective Part: B

Time 2:15 Hours

Marks:40

Section. I

Q.1 Write Short Answers to any Twelve (12) of the following Questions.

12 X 2 = 24

- 1: Define torque.
- 2: State the two conditions of equilibrium.
- 3: Differentiate static and dynamic equilibrium.
- 4: State newton's third law of motion.
- 5: Define momentum.
- 6: State law of conservation of momentum.
- 7: Define a unit vector.
- 8: Define scalar product.
- 9: State law of triangle of forces.
- 10: State Newton's first law of motion.
- 11: Define angular velocity.
- 12. Convert 25m/sec into Km/h
- 13. Define ground state and excited state.
- 14. define critical angle
- 15. Describe law of reflection.
- 16. State Hook, s law of elasticity.
- 17. State newton's law of gravitation.
- 28. Define electromagnetic waves.

Section. II

Attempt any two (2) questions

Q.1:(a) Explain resolution of vector into its rectangular components.

(b) A force of 100 N makes an angle of 30 degree with x-axis. Find its horizontal and vertical components.

Q.2: (a) Explain structure of optical fiber.

(b) Find critical angle of water. The refractive index of water is 1.33

Q.3(a) Proof law of conservation of momentum.

(b) A body of mass 3 Kg is moving towards east with a velocity of 9m/sec. Find its momentum.