

NAT I Medical Physics

| Sr | Questions | Answers Choice |
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| SI | Questions | |
| 1 | What will be the ratio of the distance moved by a freely falling body from rest in 4^{th} and 5^{th} seconds of journey? | A. 4:5 B. 7:9 C. 16:25 D. 1:1 |
| 2 | What remains constant when the earth revolves around the sun? | A. Angular momentum B. Linear momentum C. Angular kinetic energy D. Linear kinetic energy |
| 3 | When n-type of semiconductor is heated | A. Number of electrons increases while that of holes decreases B. Number of holes increases while that of electrons decreases C. Number of electrons and holes remains same D. Number of electrons and holes increases equally |
| 4 | The volt/metre is the unit of: | A. Potential B. Work C. Force D. Electric field intensity |
| 5 | Two electric bulbs of 200 W and 100 W have same voltage. If R1 and R2 be their resistance respectively then | A. R ₁ = 2R ₂ B. R ₂ = 2R ₁ C. R ₂ C. R ₂ = 4R ₁ D. R ₁ Sub>1Sub>2Sub>1Sub>2Sub>1Sub>2Sub>1Sub>2Sub>1Sub>2Sub< |
| 6 | The angle between rectangular components of a vector is | A. 0° B. 60° C. 90° D. 120° |
| 7 | A force of 10N is acting along y-axis its component along x-axis is | A. 10N B. 20N C. 100N D. Zero N |
| 8 | At constant volume temperature is increased then | A. Collision on walls will be less B. Number of collisions per unit time will increase C. Collisions will be in straight lines D. Collisions will not change |
| 9 | The contrast in the fringes in any interference pattern depends on | A. Fringe width B. Intensity ratio of the sources C. Distance between the slits D. Wavelength |
| 10 | Relation between pressure (P) and energy (E) of a gas is | A. P = 2/3 E B. P = 1/3 E C. P = 3/2 E D. P = 3 E |
| 11 | Ball pen function on the principle of | A. Viscosity B. Boyle's law C. Gravitational force D. Surface tension |
| 12 | Quantity that remains unchanged in a transformer is | A. Voltage B. Current C. Frequency |

| | | D. None of these |
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| 13 | A moving charge will gain energy due to the application of | A. Electric field B. Magnetic C. Both of these D. None of these |
| 14 | A body moving in circular motion with constant speed has | A. Constant velocity B. Constant acceleration C. Constant kinetic energy D. Constant displacement |
| 15 | A particle is moving in a uniform magnetic field then | A. Its momentum changes but total energy remains the same B. Both momentum and total energy remains the same C. Both changes D. Total energy change but momentum remains |
| 16 | If in a moving coil galvanometer a current 1 produces a deflection $\boldsymbol{\theta}$ then | A. i ∞ tan θ B. i ∞ θ ² C. i ∞ θ D. i ∞ $\sqrt{\theta}$ |
| 17 | If the metal bob is a simple pendulum is replaced by a wooden bob, then its time period will | A. Increase B. Decreases C. Remain the same D. First 'A' then 'B' |
| 18 | A body of mass 2 kg is thrown up vertically with K.E of 490 joules If the acceleration due to gravity is 9.8 m/s^2 the height at which the K.E of the body becomes half its original value is give by: | A. 50 m B. 12.5 m C. 25 m D. 10 m |
| 19 | Electrons in the atom are held in the atom due to | A. Coulomb forces B. Nuclear forces C. Gravitational forces D. Van der Waal's forces |
| 20 | Planck's constant has the dimensions of: | A. Energy B. Momentum C. Frequency D. Angular momentum |
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