

NAT I Medical Physics

Sr	Questions	Answers Choice
1	The structure of solids is investigated by using	A. Cosmic Rays B. X-rays C. Intra red Radiation D. y-rays
2	The sum of the magnitude of two forces acting at a point is 18 and the magnitude of their resultant is 12. If the resultant is at 90° with the force of the smaller magnitude then their magnitude are:	A. 3, 15 B. 4, 14 C. 5, 13 D. 6, 12
3	Two point charge $+3\mu\text{C}$ and $+8\mu\text{C}$ repel each other with a force of 40 N. if a charge of $-5\mu\text{C}$ is added to each of them then the force between will become	A. -10N B. +10N C. +20N D. -20N
4	The de broglie wave corresponding to a particle of mass m and velocity v has a wavelength associated with it	A. h/mv B. $hm v$ C. mh/v D. m/hv
5	One cannot see through fog because	A. Fog absorbs light B. The refractive index of fog is infinity C. Light suffers total reflection at the droplet in a fog D. Light is scattered by the droplets in fog
6	In an ac circuit with voltage V and current I the power dissipated is	A. VI B. $1/2 VI$ C. $1/\sqrt{2} VI$ D. Depends on the phase between V and I
7	The percentage errors in the measurements of mass and speed are 2% and 3% respectively. How much estimate of the kinetic energy obtained by measuring mass and speed	A. 11% B. 8% C. 5% D. 1%
8	Two points charges A and B separated by a distance R attract each other with a force of $12 \times 10^{-3} \text{ N}$. The force between A and B when the charges on them are doubled and distance is halved	A. 1.92 N B. 19.2 N C. 12 N D. 0.192 N
9	When the displacement is half of the amplitude the ratio of potential energy to the total energy is	A. 1/2 B. 1/4 C. 1 D. 1/8
10	If the earth were to rotate faster than its present speed the weight of an object will	A. Increase at the equator but remain unchanged at the poles B. Decrease at the equator but remain unchanged at the poles C. Remain unchanged at the decrease but decrease at the poles D. Remain unchanged at the equator but increase at the poles
11	What is the average energy of N molecules of monoatomic gas?	A. $1/2 NkT$ B. NkT C. $3/2 NkT$ D. $5/2 NkT$
12	A force of 10N is acting along y-axis its component along x-axis is	A. 10N B. 20N C. 100N D. Zero N
13	The direction of induced current is such that it opposes the very cause that has produced it This is the law of	A. Lenz B. Faraday C. Kirchoff D. Fleming
14	A particle moving in a magnetic field has increase in its velocity then its radius of the circle	A. Decreases B. Increases

		C. Remains the same D. Becomes half
15	The nuclear model of atom was proposed by	A. J.J Thomson B. E.Rutherford C. Neil Bohr D. Summerfield
16	Ball pen function on the principle of	A. Viscosity B. Boyle's law C. Gravitational force D. Surface tension
17	What remains constant in the field of central force?	A. Potential energy B. Kinetic energy C. Angular momentum D. Linear momentum
18	Energy is stored in the choke coil in the form of	A. Heat B. Magnetic energy C. Electric energy D. Electro -magnetic energy
19	At a certain instant a stationary transverse wave is found to have maximum kinetic energy the appearance of string of that instant is:	A. Sinusoidal shape with amplitude A/3 B. Sinusoidal shape with amplitude A/2 C. Sinusoidal shape with amplitude A D. Straight line
20	A train of 150 m length is going towards north direction at a speed of 10 ms^{-1} A parrot flies at a speed of 5 ms^{-1} towards south direction parallel to the railway track, The time taken by the parrot to cross the train is equal to	A. 12 s B. 8 s C. 15 s D. 10 s