NAT I Medical Physics

Sr	Questions	Answers Choice
1	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
2	The part of a transistor which is heavily doped to produce large number of majority carriers is	A. Emitter B. Base C. Collector D. Any of the above depending on nature of transistor.
3	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
4	A p-n junction has a thickness of the order of	A. 1 cm B. 1 mm C. 10⁻⁶ cm D. 10⁻¹² cm
5	Which of the following four statements is false?	A. A body can have zero velocity and still be accelerated B. A body can have a constant velocity and still have a varying speed C. A body can have a constant speed and still have a varying velocity D. The direction of the velocity of a acceleration is constant
6	Two forces are acting together on an object. The magnitude of their resultant is minimum when the angle between the force is.	A. 0° B. 60° C. 120° D. 180°
7	Center of mass is a point	A. Which is geometric center of a body B. From which distance of particles are same C. Where the whole mass of the body is supposed to be centered D. Which is the origin of reference frame
8	To make the frequency double of na oscillator we have to	A. Double the mass B. Half the mass C. Quadruple the mass D. Reduce the mass to one-fourth
9	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
10	Who explained the origin of the Fraunhofer lines?	A. Fraunhoffer B. Kirchhoff C. Fresnel D. Snell
11	The modulus of rigidity of a liquid is	A. Zero B. 1 C. Infinity D. A value not one of those mentioned above
12	When we apply reverse bias to a junction diode it	A. Lowers the potential barrier B. Raises the potential barrier C. Increase the majority carrier current

		D. Decrease the majority carrier current
13	Bernoulli's equation is based upon law of conservation	A. Mass B. Momentum C. Energy D. None of these
14	The product of the pressure and volume of an ideal gas is	A. A constant B. Approximately equal to the universal gas constant C. Directly Proportional to its temperature D. Inversely proportional to its temperature
15	Huygen's wave theory of light cannot explain	A. Diffraction B. Interference C. Polarization D. Photoelectric effect
16	In a Millikan's oil drop experiment the charge on an oil drop is calculated to be 6.35 x 10-19 C. The number of excess electrons on the drop is	A. 3.9 B. 4 C. 4.2 D. 6
17	A point charge Q is placed at the mid-point of a line joining two charges 4q and q. if the net force on charge q is zero. then Q must be equal to	A. -q B. +q C. -2q D. +4q
18	With the propagation of a longitudinal wave through a material medium the quantities transmitted in the propagation direction are	A. Energy momentum and mass B. Energy C. Energy and mass D. Energy and linear momentum
19	Which of the modulus of elasticity is involved in compressing a rod to decrease its length?	A. Young's modulus B. Bulk modulus C. Modulus of rigidity D. None of the above
20	For obtaining appreciable extension the wire should be	A. Short and thin B. Long and thin C. Short and tick D. Long and thick