NAT I Medical Physics

Sr	Questions	Answers Choice
1	A body is dropped from a tower with zero velocity reaches ground in 4s. The height of the tower is about	A. 80 m B. 20 m C. 160 m D. 40 m
2	Which of the following lists of physical quantities consists only of vectors:	A. Time,temperature,velocity B. Force,volume,momentum C. Velocity,acceleration,mass D. Force,acceleration,velocity
3	What is the ratio of r.m.s velocity for O_2 to H_2?	A. 1/4 B. 4 C. √4 : 1 D. 1 : √4
4	At 0° K which of the following properties of a gas will be zero?	A. Kinetic energy B. Potential energy C. Vibrational enegy D. Density
5	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
6	The dimensional formula of toque is:	A. [ML²T²] B. [ML T ²] C. [ML ⁻¹T ⁻²] D. [ML ⁻²T ⁻²]
7	The frequency of the incident light falling on a photosensitive metal plate is doubled the kinetic energy of the emitted photoelectrons is	A. Double the earlier value B. Unchanged C. More than doubled D. Less than doubled
8	Quantity that remains unchanged in a transformer is	A. Voltage B. Current C. Frequency D. None of these
9	The mass defect for the nucleus of helium is 0.0303 a.m.u What is the binding energy per nucleon for helium in MeV?	A. 28 B. 7 C. 4 D. 1
10	The velocity of falling raindrops attains limited value because of	A. Up thrust of air B. Vlscous force exerted by air C. Surface tension effect D. Air currents atmosphere
11	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.
12	The conductivity of a superconductor is	A. Infinite B. Very large C. Very small D. Zero

13	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
14	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
15	A 2 kg body and a 3 kg body have equal momentum if the kinetic energy of 3 kg body is 10 j, the KE of 2 kg body will be	A. 6.66 j B. 15 j C. 22.5 j D. 45 j
16	In which case dose the potential energy decreases?	A. On compressing a spring B. On stretching s spring C. One moving a body against gravitational force D. One the rising of an air bubble in water
17	The twinkling of stars is due to	A. The fact that stars do not emit light continuously B. The refractive index of the earth's atmosphere fluctuate C. Intermittent absorption of star light by its own atmosphere D. None of them
18	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
19	The dimensional formula for the modulus of elasticity is same as that for.	A. Stress B. Strain C. Velocity D. Surface tension
20	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