NAT I Medical Physics

Sr	Questions	Answers Choice
1	Energy is stored in the choke coil in the form of	A. Heat B. Magnetic energy C. Electric energy D. Electro -magnetic energy
2	Blood has a density	A. Equal to water B. Greater then water C. Lesser then water D. None of these
3	Which quantity is increased in step-down transformer?	A. Current B. Voltage C. Power D. Frequency
4	Two bodies with masses M_A and M_B are moving with equal kinetic energy.Their linear moments are numerically in a ratio $\|P_A\| : \|P_B\|$ will be:	A. M_B: M_A B. M_A: M_B C. √M_A : √M_B D. M_A²: M_B²
5	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
6	What will be the duration of the day and night (in hour) if the diameter of the earth is suddenly reduced to half its original value the mass remaining constant?	A. 12 B. 6 C. 3 D. 2
7	Copper and germanium are cooled to 70 K from room temperature then	A. Resistance of copper increases while that of germanium decreases B. Resistance of copper decreases while that of germanium increases C. Resistance of both decreases D. Resistance of both increases
8	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
9	Velocity of sound in a diatomic as is 300 m/sec what is its rms velocity	A. 400 m/sec B. 40 m/sec C. 430 m/sec D. 300 m/sec
10	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
11	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

		C. Remains the same D. Becomes half
12	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
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	According to the Hooke's law the force required to change the length of a wire by '1' is proportional to	A. 1⁻² B. 1⁻¹ C. 1 D. 1²
15	To explain his theory Bohr used	A. Conservation of linear momentum B. Conservation of angular momentum C. Conservation of quantum frequency D. Conservation of energy
16	Surface tension of water is due to	A. Inter molecular attraction B. Intermolecular spaces C. Inter molecular repulsion D. None of above
17	The nuclear model of atom was proposed by	A. J.J Thomson B. E.Rutherford C. Neil Bohr D. Summerfield
18	Radio waves of constant amplitude can be generated with	A. Rectifier B. Filter C. FET D. Oscillator
19	A motorist travels A to B at a speed at 40 km/h and returns at speed of 60 km/h. His average speed will be:	A. 40 km/h B. 48 km/h C. 50 km/h D. 60 km/h
20	When a Na ion and a Cl ion are placed in air a force F acts between them when they are separated by a distance of 1 cm from each other the permittivity of air and the dielectric constant of water are ε_0 and K respectively When a piece of salt is placed in water then the force between Na^+ and Cl^- ions separated by a distance of 1 cm will be	A. F B. FK/ε₀ C. F/Kε₀ D. F/K