

## NAT I Medical Physics

Cr.	Quanting	Anguara Chaice
Sr	Questions	Answers Choice
1	When a hydrogen atom is bombarded the atom is excited to the $n=4$ state of hydrogen atom. The energy released when the atom falls from $n=4$ state to the ground state is	A. 1.275 eV B. 12.75 eV C. 5 eV D. 8 eV
2	Two bodies with masses $M_A$ and $M_B$ are moving with equal kinetic energy.Their linear moments are numerically in a ratio $\mid P_A \mid : \mid P_B \mid$ will be:	A. <span style="font-size: 14.44444465637207px,">M</span> <sub>B </sub> : <span style="font-size: 14.44444465637207px,">M</span> <sub>A</sub> B. <span style="font-size: 14.44444465637207px,">M</span> <sub>A </sub> : <span style="font-size: 14.44444465637207px,">M</span> <sub>A </sub> : <span style="font-size: 14.44444465637207px,">M</span> <sub>B</sub> C. √ <span style="font-size: 14.44444465637207px,">M</span> <sub>A</sub> :  √ <span style="font-size: 14.44444465637207px,">M</span> <sub>B</sub> C. √span style="font-size: 14.44444465637207px,">M <sub>A</sub> <sub>B</sub> C. √span style="font-size: 14.44444465637207px,">M <sub>B</sub> <sub>C. √span style="font-size: 14.44444465637207px,"&gt;M <sub>B</sub><sub><sub><sub><sub><sub><sub><sub>&lt;</sub></sub></sub></sub></sub></sub></sub></sub>
3	The average binding energy of a nucleon inside an atomic nucleus is about	A.  8 MeV B. 8 eV C. 8 Joules D. 8 ergs
4	The fundamental unit which has same power in the dimensional formula of surface tension and viscosity is:	A. Mass B. Length C. Time D. None
5	A charge Q is divided into two parts q and Q - q and separated by a distance R. the force of repulsion between them will be maximum when:	A. $q = Q/4$ B. $q = Q/2$ C. $q = Q$ D. None of these
6	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
7	In a simple harmonic motion the kinetic energy (KE) and the potential energy (PE), are such that throughout the motion	A. KE remains constant B. PE remains constant C. KE/PE is constant D. KE + PE remains constant
8	With the increase of temperature viscosity	A. Increase B. Decrease C. Remains same D. Doubles
9	The conductivity of a superconductor is	A. Infinite B. Very large C. Very small D. Zero
10	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
		A. Ultraviolet

11	In which region of electromagnetic spectrum does the Lyman series of hydrogen atom lie	B. Intra red C. Visible D. X-ray
12	A capacitor acts as an infinite resistance for	A. AC B. DC C. Both AC and DC
13	A body moves a distance of 10 m along a straight line under the action of a force of 5 Newtons, if the work done is 25 joules the angle which the force takes with the direction of motion of the body is:	A. 0° B. 30° C. 60° D. 90°
14	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'
15	Boyle's law is applicable in	A. Isochoric process B. Isothermal process C. Isobaric process D. Isotonic process
16	The angle between rectangular components of a vector is	A. 0° B. 60° C. 90° D. 120°
17	In a Millikan's oil drop experiment the charge on an oil drop is calculated to be $6.35 \times 10$ -19 C. The number of excess electrons on the drop is	A. 3.9 B. 4 C. 4.2 D. 6
18	Ball pen function on the principle of	A. Viscosity B. Boyle's law C. Gravitational force D. Surface tension
19	Ultra-violet radiation of 6.2 eV falls on an aluminium surface K.E of fastest electrons emitted is(work function = 4.2 eV)	A. 3.2 x 10-21 J B. 3.2 x 10-19 J C. 7 x 10-25 J D. 9 x 10-32 J
20	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