

NAT-IM Medical Physics Easy Test

Sr	Questions	Answers Choice
1	The nuclear model of atom was proposed by	A. J.J Thomson B. E.Rutherford C. Neil Bohr D. Summerfield
2	There are discrete energy levels in atoms. It was first experimentally demonstrated by	A. Rutherford's experiment B. Frank Hertz experiment C. Marsden's experiment D. Sommerfield experiment
3	The essential distinction between X-rays and γ -rays is that	A. γ -rays have smaller wavelength than X-rays B. γ -rays emanate from nucleus while X-rays emanate from outer part of the atom C. γ -rays have greater ionizing power than X-rays D. γ -rays are more penetrating than X-rays
4	If two non-zero vector \vec{A} and \vec{B} are parallel to each other, then $\vec{A} \cdot \vec{B}$ is equal to	A. Zero B. AB C. $A + B$ D. $A - B$
5	The half life of a radio-isotope is 5 years The fraction of atoms decayed in this substance after 15 years will be	A. 1 B. $3/4$ C. $7/8$ D. $5/8$
6	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
7	A bullet is shot from a rifle. As a result the rifle recoils, The kinetic energy of rifle as compared to that of bullet is	A. Less B. Greater C. Equal D. Cannot be concluded
8	Which of the following sources give discrete emission spectrum?	A. Incandescent electric bulb B. Sun C. Mercury vapour lamp D. Candle
9	Which quantity is increased in step-down transformer?	A. Current B. Voltage C. Power D. Frequency
10	If 2.2 kilowatt power is transmitted through a 10 ohm line at 22000 volt, the power loss in the form of heat will be	A. 0.1 watt B. 1 watt C. 10 watt D. 100 watt
11	If in a moving coil galvanometer a current 1 produces a deflection θ then	A. $i \propto \tan \theta$ B. $i \propto \theta^2$ C. $i \propto \theta$ D. $i \propto \sqrt{\theta}$
12	A (100 W, 200 V) bulb is connected to a 160 V power supply. The power consumption would be	A. 64 W B. 80 W C. 100 W D. 125 W
13	A wire is stretched to double of its length. The strain is	A. 2 B. 1 C. Zero D. 0.5
14	Which one of the following phenomena is not explained by Huygen's construction of wavefront?	A. Refraction B. Reflection C. Diffraction D. Origin of spectra

15	A p-n junction has a thickness of the order of	<p>A. 1 cm</p> <p>B. 1 mm</p> <p>C. 10^{-6} cm</p> <p>D. 10^{-12} cm</p>
16	Angular momentum is	<p>A. Vector (axial)</p> <p>B. Vector (polar)</p> <p>C. Scalar</p> <p>D. None of these</p>
17	If yellow light emitted by sodium lamp in Young's double slit experiment is replaced by monochromatic blue light of the same intensity	<p>A. Fringe width will decrease</p> <p>B. Fringe width will increase</p> <p>C. The fringe width will remain unchanged</p> <p>D. Fringes will become less intense</p>
18	A photoelectric cell converts	<p>A. Electrical energy to light energy</p> <p>B. Light energy to light energy</p> <p>C. Light energy to electrical energy</p> <p>D. Light energy to elastic energy</p>
19	A person standing on a rotating platform has his hands lowered. He suddenly outstretches his arms. The angular momentum	<p>A. Becomes zero</p> <p>B. Increases</p> <p>C. Decreases</p> <p>D. Remains the same</p>
20	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	<p>A. -q</p> <p>B. +q</p> <p>C. -2q</p> <p>D. +4q</p>