NAT I Medical Physics

Sr	Questions	Answers Choice
1	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
2	A photocell with a constant p.d of V volt across it illuminated by a point source from a distance of 25 cm. When the source is moved to a distance of 1 m, the electrons emitted by the photocell	A. Carry 1/4th their previous energy B. Are 1/6th as numerous as before C. Are 1/4th as numerous as before D. Carry 1/4th their previous momentum
3	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
4	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
5	Steel is preferred for making springs over copper.Whey?	A. Steel is cheaper B. Young's modulus of steel is more than that of copper C. Young's modulus of copper is more than that of steel D. Steel is less likely to be oxidized
6	The excess (equal in number) of electrons that must be placed on each of two small spheres spaced 3 cm apart. with force of repulsion between the spheres to be 10^{-19} N is	A. 25 B. 225 C. 625 D. 1250
7	The angle between rectangular components of a vector is	A. 0° B. 60° C. 90° D. 120°
8	Which of the following sources give discrete emission spectrum?	A. Incandescent electric bulb B. Sun C. Mercury vapour lamp D. Candle
9	Boyle's law is applicable in	A. Isochoric process B. Isothermal process C. Isobaric process D. Isotonic process
10	A photoelectric cell converts	A. Electrical energy to light energy B. Light energy to light energy C. Light energy to electrical energy D. Light energy to elastic energy
11	Radio waves of constant amplitude can be generated with	A. Rectifier B. Filter C. FET D. Oscillator
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	The direction of induced current is such that it opposes the very cause that has produced it This is the law of	A. Lenz B. Faraday C. Kirchoff D. Fleming

15	In which region of electromagnetic spectrum does the Lyman series of hydrogen atom lie	A. Ultraviolet B. Infra red C. Visible D. X-ray
16	The nucleus 6C12 absorbs an energetic neutron and emits a beta particle (β) The resulting nucleus is	A. $_{7}N^{14}$ B. $_{5}B^{13}$ C. $_{7}N^{13}$ D. $_{6}N^{13}$
17	Mechanical waves on the surface of a liquid are	A. Transverse B. Longitudinal C. Torsional D. Both transverse and longitudinal
18	The volt/metre is the unit of:	A. Potential B. Work C. Force D. Electric field intensity
19	Band spectrum in produced by	A. H B. He C. H_2 D. Na
20	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