NAT I Medical Physics

Sr	Questions	Answers Choice
1	Bernoulli's equation is based upon law of conservation	A. Mass B. Momentum C. Energy D. None of these
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	If the amplitude of sound is doubled and the frequency reduced to one-fourth the intensity of sound at the same point will be	A. Increasing by a factor of 2 B. Decreasing by a factor of 2 C. Decreasing by a factor of 4 D. Unchanged
4	Which of the following sources give discrete emission spectrum?	A. Incandescent electric bulb B. Sun C. Mercury vapour lamp D. Candle
5	A 50-volt battery is connected across 10-ohm resistor.The current is 4.5 A.The internal resistance of the battery is	A. Zero B. 0.5 Ω C. 1.1 Ω D. 5.0 Ω
6	In a capacitive circuit	A. Current leads voltage by phase of π/2 B. Voltage leads current by phase of π/2 C. Current and voltage are in same phase D. Sometime current and sometime voltage leads
7	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
8	Which of the modulus of elasticity is involved in compressing a rod to decrease its length?	A. Young's modulus B. Bulk modulus C. Modulus of rigidity D. None of the above
9	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
10	The unit of inductance is equivalent to	A. V x s/A B. V x A/s C. A x s/v D. V/A x s
11	A capacitor acts as an infinite resistance for	A. AC B. DC C. Both AC and DC
12	Which of the following four statements is false?	A. A body can have zero velocity and still be accelerated B. A body can have a constant velocity and still have a varying speed C. A body can have a constant speed and still have a varying velocity D. The direction of the velocity of a acceleration is constant
13	For production of beats the two sources must have	A. Different frequencies and same amplitude B. Different frequencies C. Different frequencies same amplitude and same phase D. Different frequencies and same

		phase.
14	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
15	The henry is the unit for	A. Resistance B. Magnetic flux C. Magnetic field D. Inductance
16	Energy is stored in the choke coil in the form of	A. Heat B. Magnetic energy C. Electric energy D. Electro -magnetic energy
17	A 220 V, 50 Hz, AC source is connected to an inductance of 0.2.H and a resistance of 20 ohm in series What is the current in the circuit?	A. 10 A B. 5 A C. 33.3 A D. 3.33 A
18	Choose the correct statement	A. Both an ammeter and voltmeter should have small resistance B. Both an ammeter and a voltmeter should have large resistance C. An ammeter should have large resistance and a voltmeter should have small resistance D. An ammeter should have small resistance and a voltmeter should have large resistance
19	How much water a pump of 2kW can raise in one minute to a height of 10 m. take g = 10 m/s^2?	A. 1000 liters B. 1200 liters C. 100 liters D. 2000 liters
20	A particle is moving in a uniform magnetic field then	A. Its momentum changes but total energy remains the same B. Both momentum and total energy remains the same C. Both changes D. Total energy change but momentum remains