NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	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
2	Which one of the following phenomena is not explained by Hugen's construction of wavefront?	A. Refraction B. Reflection C. Diffraction D. Origin of sepectra
3	A cable breaks if stretched by more than 2 mm. It is cut into two equal parts. How much either part can be stretched without breaking?	A. 0.25 m B. 0.5 m C. 1 mm D. 2 mm
4	Two forces are acting together on an object. The magnitude of their resultant is minimum when the angle between the force is	A. 0° B. 60° C. 120° D. 180°
5	The sieman is the SI unit of	A. Resistance B. Specific Resistance C. Conductance D. Inductance
6	The mass of a proton is 1847 times that of an electron. An electron and a proton are projected into a uniform electric field in a direction at right angles to the direction of the field with the same initial kinetic energy.The	A. Both the trajectories will be equally curved B. The proton trajectory will be less curved than the electron trajectory C. The electron trajectory will be less curved than the proton trajectory D. The relative curving of the trajectories will be dependent on the value of the initial kinetic energy
7	The primary winding of transformer has 500 turns whereas its secondary has 5000 turns. The primary is connected to an a.c. supply of 20 V, 50 Hz. The secondary will have an output of	A. 200V, 50 Hz B. 2V, 50 Hz C. 200V, 500 Hz D. 2V, 5 Hz
8	In a Millikan's oil drop experiment the charge on an oil drop is calculated to be 6.35 x 10^{-19}C. The number of excess electrons on the drop is	A. 3.9 B. 4 C. 4.2 D. 6
9	Bernoulli's equation is based upon law of conservation	A. Mass B. Momentum C. Energy D. None of these
10	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
11	Which quantity is increased in step-down transformer?	A. Current B. Voltage C. Power D. Frequency
12	What will be the ratio of the distance moved by a freely falling body from rest in 4th and 5th seconds of journey?	A. 4 : 5 B. 7 : 9 C. 16 : 25 D. 1 : 1
13	In an A.C. circuit, a resistance of R ohm is connected in series with an inductance L. If phase	A. R/4 B. R/2

13	angle between voltage and current be 45°, the value of inductive reactance will be	C. R D. Cannot be found with the given data
14	To increase the magnification of a telescope	A. The objective lens should be of large focal length and eyepiece should be of short focal length B. The objective and eyepiece both should be of large focal lengths C. Both the objective and eyepiece should be of smaller lengths D. The objective should be small focal length and eyepiece should be of large focal length
15	The number of translation degrees of freedom for a diatomic gas is	A. 2 B. 3 C. 5 D. 6
16	Which of the following sources give discrete emission spectrum?	A. Incandescent electric bulb B. Sun C. Mercury vapour lamp D. Candle
17	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
18	The percentage errors in the measurements of mass and speed are 2% and 3% respectively. How much will be the maximum error in the estimate of the kinetic energy obtained by measuring mass and speed	A. 11% B. 8% C. 5% D. 1%
19	A man pushes a wall but fails to displace it. He does:	A. Negative work B. Maximum positive work C. Positive work but not maximum D. No work
20	The conductivity of a superconductor is	A. Infinite B. Very large C. Very small D. Zero