

NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	The time period of a simple pendulum is 2 seconds. If its length is increased by 4 times, then its period becomes	A. 16 s B. 12 s C. 8 s D. 4 s
2	The henry is the unit for	A. Resistance B. Magnetic flux C. Magnetic field D. Inductance
3	The product of the pressure and volume of an ideal gas is	A. A constant B. Approximately equal to the universal gas constant C. Directly proportional to its temperature D. Inversely proportional to its temperature
4	Energy is stored in the choke coil in the form of	A. Heat B. Magnetic energy C. Electric energy D. Electro-magnetic energy
5	Which one of the following phenomena is not explained by Hugen's construction of wavefront?	A. Refraction B. Reflection C. Diffraction D. Origin of spectra
6	When light wavelength 300 nm (nanometer) falls on a photoelectric emitter, photoelectrons are liberated. For another emitter, however, light of 600 nm wavelength is sufficient for creating photoemission. What is the ratio of the work functions of the two emitters?	A. 1 : 2 B. 2 : 1 C. 4 : 1 D. 1 : 4
7	According to classical theory the proposed circular path of an electron in Rutherford model of atom will be	A. Circular B. Straight line C. Parabolic D. Spiral
8	A fly is sitting on the objective of a telescope pointed towards the moon. What effect is expected on the photography of the moon taken through the telescope?	A. The entire of view blocked B. There is an image of the fly on the photography C. There is no effect at all D. There is a reduction in the intensity of the image
9	To get a resultant displacement of 10 m, two displacement vectors of magnitude 6 m and 8 m should be combined	A. Parallel B. Antiparallel C. At angle 60° D. Perpendicular to each other
10	In Young's experiment, two coherent sources are placed 0.90 mm apart and the fringes are observed one metre away. If it produces the second dark fringe at a distance of 1 mm from the central fringe, the wavelength of monochromatic light used would be	A. 60×10^{-4} cm B. 10×10^{-4} cm C. 10×10^{-5} cm D. 6×10^{-5} cm
11	The incorrect statement regarding the lines of force of the magnetic field B is	A. Magnetic intensity is a measure of lines of force passing through unit area held normal to it B. Magnetic lines of force form a close curve C. Inside a magnet, its magnetic lines of force move from north pole of a magnet towards its south pole D. Due to a magnet magnetic lines of force never cut each other
12	The sieman is the SI unit of	A. Resistance B. Specific Resistance C. Conductance D. Inductance
13	Which of the following is a scalar quantity?	A. Density B. Displacement

		C. Torque D. Weight
14	The force between two charges 0.06 m apart is 5 N. If each charge is moved towards the other by 0.01 m, then the force between them will become	A. 7.20 N B. 11.25 N C. 22.50 N D. 45.00
15	A 220 V, 50 Hz A.C. 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
16	An ideal choked (used along with fluorescent tube) would be	A. A pure resistor B. A pure capacitor C. A pure inductor D. A combination of an inductor and a capacitor
17	If the metal bob is a simple pendulum is replaced by a wooden bob, then its time period will	A. Increases B. Decreases C. Remain the same D. First A then B
18	Two sources of sound are said to be coherent if	A. They produce sounds of equal intensity B. They produce sounds of equal frequency C. They produce sound waves vibrating with the same phase D. They produce sound waves with zero or constant phase different all instant of time
19	Boyle's law is applicable in	A. Isochoric process B. Isothermal process C. Isobaric process D. Isotonic process
20	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