NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	The sum of the magnitude of two forces acting at a point is 18 and the magnitude of their resultant is 12. If the resultant is at 90°with the force of the smaller magnitude, then their magnitudes are:	A. 3, 15 B. 4, 14 C. 5, 13 D. 6, 12
2	The contrast in the fringes in any interference pattern depends on	A. Fringe width B. Intensity ratio of the sources C. Distance between the slits D. Wavelength
3	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
4	In case of p-n junction diode, at high value of reverse bias, the current rises sharply. The value of reverse bias is known as:	A. Cut off voltage B. Zener voltage C. Inverse voltage D. Critical voltage
5	The velocity of falling raindrops attains limited value because of	A. Up thrust of air B. Viscous force exerted by air C. Surface tension effect D. Air currents atmosphere
6	A boy 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
7	To explain his theory Bohr used	A. Conservation of linear momentum B. Conservation of angular momentum C. Conservation of quantum frequency D. Conservation of energy
8	The conductivity of a superconductor is	A. Infinite B. Very large C. Very small D. Zero
9	Shunt required in an ammeter of resistance R to decrease its deflection from 30 ampere to 10 ampere is	A. R/4 B. R/3 C. R/2 D. R
10	Band spectrum is produced by	A. H B. He C. H₂ D. Na
11	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
12	All of the following statements are correct except	A. The total focal length of astronomical telescope is the sum of the focal lengths of its two lenses B. The image formed by the astronomical telescope is always erect because the effect of the combination of the two lenses is divergent C. The magnification of an astronomical telescope can increases by decreasing the focal length of the eyepiece D. The magnifying power of the refracting type of astronomical telescope is the ratio of the focal length of the objective to that of the eye piece

13	The length of a telescope is 36 cm. The focal lengths of its lenses can be	A. 30 cm, 6 cm B. -30 cm, -6 cm C. 30 cm, -6cm D. -30cm, 6cm
14	The dimensional formula of torque is:	A. [ML²T⁻²] B. {MLT⁻²] C. [ML⁻¹T⁻²] D. [ML⁻²T⁻²]
15	The volt/metre is the unit of:	A. Potential B. Work C. Force D. Electric field intensity
16	A conducting wire is drawn to double its length. Final resistivity of the material will be	A. Double of the original one B. Half of the original one C. One-fourth of the original one D. Same as original one
17	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
18	The twinkling of stars is due to	A. The fact that stars do not emit light continuously B. The refractive index of the earth's atmosphere fluctuate C. Intermittent absorption of star light by its own atmosphere D. None of these
19	In Young's experiment, two coherent sources are placed 0.90 mm apart and the fringes are observed one metre away. If its 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 x 10⁻⁴cm B. 10 x 10⁻⁴cm C. 10 x 10⁻⁵cm D. 6 x 10⁻⁵cm
20	The dimensional formula for the modulus of elasticity is same as that for:	A. Stress B. Strain C. Velocity D. Surface tension