

NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	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 increase 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
2	Which of the following is not thermo dynamical function?	A. Enthalpy B. Work done C. Gibb's energy D. Internal energy
3	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
4	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
5	Radio waves of constant amplitude can be generated with	A. Rectifier B. Filter C. FET D. oscillator
6	Which of the following lists of physical quantities consists only of vectors:	A. Time, temperature, velocity B. Force, volume, momentum C. Velocity, acceleration, mass D. Force, acceleration, velocity
7	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
8	Bernoulli's equation is based upon law of conservation	A. Mass B. Momentum C. Energy D. None of these
9	Surface tension of water is due to	A. Inter molecular attractions B. Intermolecular spaces C. Inter molecular repulsion D. None of above
10	A ten-ohm electric heater operates on a 110 V line. Calculate the rate at which it develops heat in watts:	A. 1310 W B. 670 W C. 810 W D. 1210 W
11	In which region of electromagnetic spectrum does the Lyman series of hydrogen atom lie	A. Ultraviolet B. Infrared C. Visible D. X-ray
		A. Transverse

12	Mechanical waves on the surfaces of a liquid are	B. Longitudinal C. Torsional D. both transverse and longitudinal
13	Planck's constant has the dimensions of:	A. Energy B. Momentum C. Frequency D. Angular momentum
14	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
15	In an A.C. circuit, a resistance of R ohm is connected in series with an inductance L. If phase angle between voltage and current be 45° , the value of inductive reactance will be	A. R/4 B. R/2 C. R D. Cannot be found with the given data
16	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 1m, the electrons emitted by the photocell	A. Carry 1/4th their previous energy B. Are 1/16th as numerous as before C. Are 1/4th as numerous as before D. Carry 1/4th their previous momentum
17	Angular momentum is	A. Vector (axial) B. Vector (polar) C. Scalar D. None of these
18	What will be the duration of the day and night (in hour) if the diameter of the earth is suddenly reduced to half its original value, the mass remaining constant?	A. 12 B. 6 C. 3 D. 2
19	When boron is added as an impurity to silicon, the resulting material is.	A. n type conductor B. n type semiconductor C. p-type conductor D. p-type semiconductor
20	As the electron in Bohr orbit of hydrogen atom passes from stat $n = 2$ to $n = 1$, the kinetic energy K and potential energy U change as	A. K two fold, U also two fold B. K four fold, U also four fold C. K four fold, U two fold D. K two fold, U four fold