NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	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
2	Velocity of sound in a diatomic as is 300 m/sec, what is its rms velocity?	A. 400 m/sec B. 40 m/sec C. 430 m/sec D. 300 m/sec
3	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
4	What remains constant when the earth revolves around the sun?	A. Angular momentum B. Linear momentum C. Angular kinetic energy D. Linear kinetic energy
5	If yellow light emitted by sodium lamp in Young's double slit experiment is replaced by monochromatic blue light of the same intensity	A. Fringe width will decrease B. Fringe width will increase C. The fringe width will remain unchanged D. Fringes will becomes less intense
6	The average binding energy of a nucleus inside an atomic nucleus is about	A. 8 MeV B. 8 eV C. 8 Joules D. 8 ergs
7	A moving charge will gain energy due to the application of	A. Electric field B. Magnetic field C. Both of these D. None of these
8	Which of the following is a scalar quantity?	A. Density B. Displacement C. Torque D. Weight
9	In which case application of angular velocity is useful?	A. When a body is rotating B. When velocity of body is in a straight line C. When velocity is in a straight line D. None of these
10	There are discrete energy levels in atoms. It was first experimentally demonstrated by	A. Rutherford's experiment B. Franck Hertz experiment C. Marsden's experiment D. Somerfield experiment
11	To make the frequency double of an oscillator, we have to	A. Double the mass B. Half the mass C. Quadruple the mass D. Reduce the mass to one fourth
12	Electrons in the atom are held in the atom due to	A. Coulomb forces B. Nuclear forces C. Gravitational forces D. Van der Waal's forces
13	A p-n junction has a thickness of the order of:	A. 1 cm B. 1 mm C. 10⁻⁶cm D. 10⁻¹²cm

14	The half-life of a radio-isotope is 5 years. The fraction of atoms decayed in this substance after 15 years will be	A. 1 B. 3/4 C. 7/8 D. 5/8
15	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
16	Two electric bulbs of 200 W and 100 W have same voltage. If $R_1$and R_2be their resistance respectively then	A. R₁=2R₂ B. R₂=2R₁ C. R₂=4R₁ D. R₁=4R₂
17	The sieman is the SI unit of	A. Resistance B. Specific Resistance C. Conductance D. Inductance
18	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
19	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
20	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