NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	When a hydrogen atom is bombarded, the atom is excited to the n = 4 state of hydrogen atom. The energy released when the atom falls from n = 4 state to the ground state is	A. 1.275 eV B. 12.75 eV C. 5 eV D. 8 eV
2	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
3	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
4	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
5	Radio waves of constant amplitude can be generated with	A. Rectifier B. Filter C. FET D. oscillator
6	A prism splits a beam of white light into its seven constituent colors. This is so because	A. Phase of different colors is different B. Amplitude of different colors is different C. Energy of different colors is different D. Velocity of different colors is different
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	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
9	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
10	In Which case does the potential energy decreases?	A. On compressing a spring B. On stretching a spring C. One moving a body against gravitational force D. One the rising of an air bubble in water
11	The peak voltage in 220 volt A.C. supply is nearly	A. 220 volt B. 253 volt C. 311 volt D. 440 volt
		A. 0°

12	Two forces are acting together on an object. The magnitude of their resultant is minimum when the angle between the force is	B. 60° C. 120° D. 180°
13	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
14	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
15	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
16	The nuclear model of atom was proposed by	A. J.J Thomson B. E. Rutherford C. Neil Bohr D. Summerfield
17	The structure of solids is investigated by using	A. Cosmic Rays B. X-rays C. Intra red Radiation D. γ-rays
18	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
19	Ultra-violet radiation of 6.2 eV falls on an aluminium surface. K.E. of fastest electron emitted is (Work function = 4.2 eV)	A. 3.2 x 10-21 J B. 3.2 x 10-19 J C. 7 x 10-25 J D. 9 x 10-32 J
20	Planck's constant has the dimensions of:	A. Energy B. Momentum C. Frequency D. Angular momentum