NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	In a voltmeter the conduction takes place due to	A. Electrons only B. Holes only C. Electrons and holes D. Electrons and ions
2	The peak voltage in 220 volt A.C. supply is nearly	A. 220 volt B. 253 volt C. 311 volt D. 440 volt
3	A couple produces	A. Purely linear motion B. Purely rotational motion C. Linear and rotational motion D. No motion
4	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
5	The number of translation degrees of freedom for a diatomic gas is	A. 2 B. 3 C. 5 D. 6
6	Boyle's law is applicable in	A. Isochoric process B. Isothermal process C. Isobaric process D. Isotonic process
7	Two forces of 10N and 15N are acting simultaneously on an object in the same direction. Their resultant is	A. Zero B. 5N C. 25N D. 150N
8	The dimensional formula for the modulus of elasticity is same as that for:	A. Stress B. Strain C. Velocity D. Surface tension
9	Two forces are acting together on an object. The magnitude of their resultant is minimum when the angle between the force is	A. 0° B. 60° C. 120° D. 180°
10	How does the Young's modulus vary with the increase of temperature?	A. Decrease B. Increases C. Remains constant D. First increases and then decreases
11	In which region of electromagnetic spectrum does the Lyman series of hydrogen atom lie	A. Ultraviolet B. Infrared C. Visible D. X-ray
12	The nucleus 6C12 absorbs an energetic neutron and emits a beta particle (β). The resulting nucleus is	A. ₇N¹⁴ B. ₅B¹³ C. ₇N¹³ D. ₆C¹³
13	Which one of the following phenomena is not explained by Huygen's construction of wavefront?	A. Refraction B. Reflection C. Diffraction D. Origin of spectra
14	A body moving in circular motion with constant speed has	A. Constant velocity B. Constant acceleration

		C. Constant kinetic energy D. Constant displacement
15	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
16	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
17	What remains constant in the field of central force?	A. Potential energy B. Kinetic energy C. Angular momentum D. Linear momentum
18	Angular momentum is	A. Vector (axial) B. Vector (polar) C. Scalar D. None of these
19	The henry is the unit for	A. Resistance B. Magnetic flux C. Magnetic field D. Inductance
20	If a diamagnetic substance is brought near north or south pole of a bar magnet it is	A. Attracted by the poles B. Repelled by the poles C. Repelled by north pole and attracted by the south pole D. Attracted by the north pole and repelled by the south pole