

NAT I Engineering Physics

Sr	Questions	Answers Choice
1	Huygen's wave theory of light cannot explain	A. Diffraction B. Interference C. Polarization D. Photoelectric effect
2	The dimensional formula for the modulus of elasticity is same as that for.	A. Stress B. Strain C. Velocity D. Surface tension
3	In an ac circuit with voltage V and current I the power dissipated is	A. VI B. $\frac{1}{2} VI$ C. $\frac{1}{\sqrt{2}} VI$ D. Depends on the phase between V and I
4	The modulus of rigidity of a liquid is	A. Zero B. I C. Infinity D. A value not one of those mentioned above
5	Which of the following is a scalar quantity	A. Density B. Displacement C. Torque D. Weight
6	The number of translation degrees of freedom for a diatomic gas is	A. 2 B. 3 C. 5 D. 6
7	There are discrete energy levels in atoms. It was first experimentally demonstrated by	A. Rutherford's experiment B. Frank Hertz experiment C. Marsden's experiment D. Sommerfeld experiment
8	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
9	The nucleus ${}_{6}^{12}\text{C}$ absorbs an energetic neutron and emits a beta particle (β) The resulting nucleus is	A. ${}_{7}^{14}\text{N}$ B. ${}_{5}^{14}\text{B}$ C. ${}_{7}^{13}\text{N}$ D. ${}_{6}^{13}\text{N}$
10	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 1 m, the electrons emitted by the photocell	A. Carry 1/4th their previous energy B. Are 1/6th as numerous as before C. Are 1/4th as numerous as before D. Carry 1/4th their previous momentum
11	Which of the following is not thermo dynamical function?	A. Enthalpy B. Work done C. Gibb's energy D. Internal energy
12	If the earth were to rotate faster than its present speed the weight of an object will	A. Increase at the equator but remain unchanged at the poles B. Decrease at the equator but remain unchanged at the poles C. Remain unchanged at the decrease but decrease at the poles D. Remain unchanged at the equator but increase at the poles

13	The essential distinction between X-rays and y-rays is that	<p>A. y-rays have smaller wavelength than X-rays</p> <p>B. y-rays emanate from nucleus while X-rays emanate from outer part of the atom</p> <p>C. y-rays have greater ionizing power than X-rays</p> <p>D. y-rays are more penetrating than X-rays</p>
14	One cannot see through fog because	<p>A. Fog absorbs light</p> <p>B. The refractive index of fog is infinity</p> <p>C. Light suffers total reflection at the droplet in a fog</p> <p>D. Light is scattered by the droplets in fog</p>
15	A prism splits a beam of white light into its seven constituent colors this is so because	<p>A. Phase of different colors is different</p> <p>B. Amplitude of different colors is different</p> <p>C. Energy of different colors is different</p> <p>D. Velocity of different colors is different</p>
16	A pendulum clock set to give correct time in Karachi is taken to Quetta it would give correct time if	<p>A. The mass of the pendulum is increased</p> <p>B. The mass of the pendulum is decreased</p> <p>C. The length of the pendulum os increased</p> <p>D. The length of the pendulum is decreased</p>
17	The contrast in the fringes in any interference pattern depends on	<p>A. Fringe width</p> <p>B. Intensity ratio of the sources</p> <p>C. Distance between the slits</p> <p>D. Wavelength</p>
18	A capacitor acts as an infinite resistance for	<p>A. AC</p> <p>B. DC</p> <p>C. Both AC and DC</p>
19	A body moving in circular motion with constant speed has	<p>A. Constant velocity</p> <p>B. Constant acceleration</p> <p>C. Constant kinetic energy</p> <p>D. Constant displacement</p>
20	A body of mass 2 kg is thrown up vertically with K.E of 490 joules If the acceleration due to gravity is 9.8 m/s^2 the height at which the K.E of the body becomes half its original value is give by:	<p>A. 50 m</p> <p>B. 12.5 m</p> <p>C. 25 m</p> <p>D. 10 m</p>