NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	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
2	A person standing near the track of a fast moving train has tendency to fall towards it because of	A. Vibration due to motion of train B. Gravitation force of attraction between person and trains C. The high speed of train D. Some other effect
3	Centre of mass is a point	A. Which is geometric centre of a body B. From which distance of particles are same C. Where the whole mass of the body is supposed to be centered D. Which is the origin of reference frame
4	The dimensional formula of torque is:	A. [ML²T⁻²] B. {MLT⁻²] C. [ML⁻¹T⁻²] D. [ML⁻²T⁻²]
5	A sun rise or sun set, the sun looks reddish because:	A. The sun is coldest at these times B. Of the effects of reflection and refraction C. The sun is hottest at these times D. Of the scattering of light
6	Absolute temperature can be calculated by	A. Mean square velocity B. Motion of the molecule C. Both A and B D. None of these
7	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
8	Surface tension of water is due to	A. Inter molecular attractions B. Intermolecular spaces C. Inter molecular repulsion D. None of above
9	Which one of the following phenomena is not explained by Hugen's construction of wavefront?	A. Refraction B. Reflection C. Diffraction D. Origin of sepectra
10	Which of the following four statement is false?	A. A body can have zero velocity and still be accelerated B. A body can have a constant velocity and still have a varying speed C. A body can have a constant speed and still have a varying velocity D. The direction of the velocity of a body can change when its acceleration is constant
11	For production of beats the two sources must have	A. Different frequencies and same amplitude B. Different frequencies C. Different frequencies, same amplitude and same phase D. Different frequencies and same phase
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	Boyle's law is applicable in	A. Isochoric process B. Isothermal process C. Isobaric process D. Isotonic process
14	Band spectrum is produced by	A. H B. He C. H₂ D. Na
15	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
16	Who explained the origin of the Fraunhoffer lines?	A. Fraunhoffer B. Kirchhoff C. Fresnel D. Snell
17	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
18	Which of the following is the only vector quantity?	A. Temperature B. Energy C. Power D. Momentum
19	Which of the modulus of elasticity is involved in compression a rod to decrease its length?	A. Young's modulus B. Bulk modulus C. Modulus of rigidity D. None of the above
20	When the length of a microscope tube increase, its magnifying power	A. Decreases B. Increases C. Does not Change D. May increase or decrease depending on the observer and the place of observation