

## NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	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
2	A 2 kg body and a 3 kg body have equal momentum. If the kinetic energy of 3 kg body is 10 J, the KE of 2 kg body will be	A. 6.66 J B. 15 J C. 22.5 J D. 45 J
3	A (100 W, 200 V) bulb is connected to a 160 V power supply. The power consumption would be	A. 64 W B. 80 W C. 100 W D. 125 W
4	All of the following statements are correct except	A. The total focal length of astronomical telescope is the sum of the focal lengths of its two lenses B. The image formed by the astronomical telescope is always erect because the effect of the combination of the two lenses is divergent C. The magnification of an astronomical telescope can increase by decreasing the focal length of the eyepiece D. The magnifying power of the refracting type of astronomical telescope is the ratio of the focal length of the objective to that of the eye piece
5	A motorist travels A to B at a speed at 40 km/h and returns at speed of 60 km/h. His average speed will be	A. 40 km/h B. 48 km/h C. 50 km/h D. 60 km/h
6	What remains constant when the earth revolves around the sun?	A. Angular momentum B. Linear momentum C. Angular kinetic energy D. Linear kinetic energy
7	Steel is preferred for making springs over copper. Why?	A. Steel is cheaper B. Young's modulus of steel is more than that of copper C. Young's modulus of copper is more than that of steel D. Steel is less likely to be oxidized
8	A photoelectric cell converts	A. Electrical energy to light energy B. Light energy to light energy C. Light energy to electrical energy D. Light energy to elastic energy
9	Angular momentum is	A. Vector (axial) B. Vector (polar) C. Scalar D. None of these
10	The nucleus ${}^6_{}C^{12}$ absorbs an energetic neutron and emits a beta particle ( $\beta$ ). The resulting nucleus is	A. ${}^7_{}N^{14}$ B. ${}^5_{}B^{13}$ C. ${}^7_{}N^{13}$ D. ${}^6_{}C^{13}$
11	If the period of oscillation of mass (M) suspended from a spring is 2s, then the period of mass 4M will be	A. 1 s B. 2 s C. 3 s D. 4 s
12	In which region of electromagnetic spectrum does the Lyman series of hydrogen atom lie	A. Ultraviolet B. Infrared C. Visible D. X-ray
		A. Parallel

13	To get a resultant displacement of 10 m, two displacement vectors of magnitude 6 m and 8 m should be combined	<p>B. Antiparallel  C. At angle <math>60^\circ</math>  D. Perpendicular to each other</p>
14	When boron is added as an impurity to silicon, the resulting material is.	<p>A. n type conductor  B. n type semiconductor  C. p-type conductor  D. p-type semiconductor</p>
15	Which of the following is not thermo dynamical function?	<p>A. Enthalpy  B. Work done  C. Gibb's energy  D. Internal energy</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  B. The mass of the pendulum is decreased  C. The length of the pendulum is increased  D. The length of the pendulum is decreased</p>
17	A moving charge will gain energy due to the application of	<p>A. Electric field  B. Magnetic field  C. Both of these  D. None of these</p>
18	The initial velocity of a body moving along a straight line is 7 m/s. It has a uniform acceleration of $4 \text{ m/s}^2$ . The distance covered by the body in the 5th second of its motion is	<p>A. 25 m  B. 35 m  C. 50 m  D. 85 m</p>
19	The mass of a proton is 1847 times that of an electron. An electron and a proton are projected into a uniform electric field in a direction at right angles to the direction of the field with the same initial kinetic energy. The	<p>A. Both the trajectories will be equally curved  B. The proton trajectory will be less curved than the electron trajectory  C. The electron trajectory will be less curved than the proton trajectory  D. The relative curving of the trajectories will be dependent on the value of the initial kinetic energy</p>
20	The dimensional formula of torque is:	<p>A. <math>[ML^2T^{-2}]</math>  B. <math>[MLT^{-2}]</math>  C. <math>[ML^{-1}T^{-2}]</math>  D. <math>[ML^{-2}T^{-2}]</math></p>