NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	A bullet is shot from a rifle. As a result the rifle recoils. The kinetic energy of rifle as compared to that of bullet is	A. Less B. Greater C. Equal D. Cannot be concluded
2	What is the average energy of N molecules of monoatomic gas?	A. 1/2 NKT B. NKT C. 3/2 NKT D. 5/2 NKT
3	The unit of electric current 'ampere' is the amount of current flowing through each of two parallel wires 1 m apart and of infinite length will give rise to a force between them equal to	A. 1 N/m B. 2 x 10⁻⁷N/m C. 1 x 10⁻²N/m D. 4 x 10²N/m
4	To get a resultant displacement of 10 m, two displacement vectors of magnitude 6 m and 8 m should be combined	A. Parallel B. Antiparallel C. At angle 60° D. Perpendicular to each other
5	Bernoulli's equation is based upon law of conservation	A. Mass B. Momentum C. Energy D. None of these
6	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
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 ot be oxidized
8	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
9	The time period of a simple pendulum is 2 seconds. If its length is increased by 4 times, then its period becomes	A. 16 s B. 12 s C. 8 s D. 4 s
10	When boron is added as an impurity to silicon, the resulting material is.	A. n type conductor B. n type semiconductor C. p-type conductor D. p-type semiconductor
11	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
12	A person standing on a rotating platform has his hands lowered. He suddenly outstretches his arms. The angular momentum	A. Becomes zero B. Increases C. Decreases D. Remains the same
13	In which of the following states does the incandescent substance give continuous spectrum?	A. Vapours in atomic state B. Vapours in molecular state C. Solid or fluid in bulk state D. Solid or fluid in plasma state

14	Surface tension of water is due to	A. Inter molecular attractions B. Intermolecular spaces C. Inter molecular repulsion D. None of above
15	A voltmeter has resistance of 2000 ohms and it can measure up to 2V. If we want to increase its range to 10V then required resistance in series will be	A. 2000 ohm B. 4000 ohm C. 6000 ohm D. 8000 ohm
16	The percentage errors in the measurements of mass and speed are 2% and 3% respectively. How much will be the maximum error in the estimate of the kinetic energy obtained by measuring mass and speed	A. 11% B. 8% C. 5% D. 1%
17	Shunt required in an ammeter of resistance R to decrease its deflection from 30 ampere to 10 ampere is	A. R/4 B. R/3 C. R/2 D. R
18	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
19	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 1m, the electrons emitted by the photocell	A. Carry 1/4th their previous energy B. Are 1/16th as numerous as before C. Are 1/4th as numerous as before D. Carry 1/4th their previous momentum
20	If the metal bob is a simple pendulum is replaced by a wooden bob, then its time period will	A. Increas B. Decreases C. Remain the same D. First A then B