

NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	The contrast in the fringes in any interference pattern depends on	A. Fringe width B. Intensity ratio of the sources C. Distance between the slits D. Wavelength
2	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
3	The smooth or steady stream-line flow is known as	A. Laminar flow B. Turbulent flow C. Both a and b D. None of the above
4	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
5	A 50-volt battery is connected across 10-ohm resistor. The current is 4.5 A. The internal resistance of the battery is	A. Zero B. 0.5 ohm C. 1.1 ohm D. 5.0 ohm
6	Two point charges A and B separated by a distance R attract each other with a force of 12×10^{-3} N. The force between A and B when the charges on them are doubled and distance is halved	A. 1.92 N B. 19.2 N C. 12 N D. 0.192 N
7	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
8	In a common base transistor circuit, the current gain is 0.98. On changing the emitter current by 5.00 mA, the change in collector current is	A. 0.916 mA B. 2.45 mA C. 4.9 mA D. 5.1 mA
9	In a simple harmonic motion (SHM), which of the following does not hold?	A. The force on the particle is maximum at the ends B. The acceleration is minimum at the mean position C. The potential energy is maximum at the mean position D. The kinetic energy is maximum at the mean position
10	The direction of induced current is such that it opposes the very cause that has produced it. This is the law of	A. Lenz B. Faraday C. Kirchoff D. Fleming
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	When we apply reverse bias to a junction diode, it	A. Lowers the potential barrier B. Raise the potential barrier C. Increase the majority carrier current D. Increase the minority carrier current
13	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
14	Quantity that remains unchanged in a transformer is	A. Voltage B. Current

		<p>C. Frequency</p> <p>D. None of these</p>
15	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>
16	The dot product of two vectors is negative when	<p>A. They are parallel vectors</p> <p>B. They are anti-parallel vectors</p> <p>C. They are perpendicular vectors</p> <p>D. None of the above is correct</p>
17	The dimensional formula of torque is:	<p>A. $[ML^2T^{-2}]$</p> <p>B. $[MLT^{-2}]$</p> <p>C. $[ML^{-1}T^{-2}]$</p> <p>D. $[ML^{-2}T^{-2}]$</p>
18	According to the Hooke's law the force required to change the length of a wire by 'l' is proportional to	<p>A. l^{-2}</p> <p>B. l^{-1}</p> <p>C. l</p> <p>D. l^2</p>
19	The force between two charges 0.06 m apart is 5 N. If each charge is moved towards the other by 0.01 m, then the force between them will become	<p>A. 7.20 N</p> <p>B. 11.25 N</p> <p>C. 22.50 N</p> <p>D. 45.00</p>
20	What remains constant when the earth revolves around the sun?	<p>A. Angular momentum</p> <p>B. Linear momentum</p> <p>C. Angular kinetic energy</p> <p>D. Linear kinetic energy</p>