

Physics Fsc Part 1 Chapter 11 Online Test

Sr	Questions	Answers Choice
1	if the rest mass of a particle m_0 increased to m due to its high speed then its kinetic energy is.	<p>A. $(m - m_0) c^2$</p> <p>B. $\frac{1}{2} m v^2$</p> <p>C. $\frac{1}{2} m c^2$</p> <p>D. $\frac{1}{2} (m - m_0) c^2$</p>
2	A photon is particle of light. What is its mass when it moves with $0.9 C$?	<p>A. $9.1 \times 10^{-31} \text{ kg}$</p> <p>B. $1.67 \times 10^{-19} \text{ kg}$</p> <p>C. $1.67 \times 10^{-27} \text{ kg}$</p> <p>D. Zero</p>
3	If a material object moves with the speed of light 'c' its mass becomes	<p>A. Equal to its rest mass</p> <p>B. Infinite</p> <p>C. Four times of its rest mass</p> <p>D. Double of its rest mass</p>
4	The mass of an object will be doubled at the speed.	<p>A. $2.6 \times 10^7 \text{ m/s}$</p> <p>B. $1.6 \times 10^8 \text{ m/s}$</p> <p>C. $2.6 \times 10^8 \text{ m/s}$</p> <p>D. None of these</p>
5	Relativistic mechanics yields results different from classical mechanics for objects moving with.	<p>A. Low velocity</p> <p>B. Velocity equal to that of sound waves</p> <p>C. Velocity greater than sound waves</p> <p>D. Velocity approaching that of light</p>
6	Relativistic velocity is of the order of.	<p>A. $1/15$ of the velocity of light</p> <p>B. $1/20$ of the velocity of light</p> <p>C. $1/10$ of the velocity of light</p> <p>D. $1/25$ of the velocity of light</p>
7	The speed of beam light of a car while moving with high speed as compared to its rest position is	<p>A. Greater</p> <p>B. Less</p> <p>C. Same</p> <p>D. Zero</p>
8	The theory of relativity was proposed in	<p>A. 1920</p> <p>B. 1905</p> <p>C. 1915</p> <p>D. 1895</p>
9	Which one of the following physical quantities is independent of relativistic speed.	<p>A. Charge</p> <p>B. Length</p> <p>C. Mass</p> <p>D. Time</p>
10	If an observer is moving in the same direction as a sound wave, the velocity of the wave seems to be	<p>A. Less</p> <p>B. More</p> <p>C. Constant</p> <p>D. Sum of the two velocities</p>
11	A non-inertial frame of reference.	<p>A. Moves with some acceleration</p> <p>B. Is always rest on earth</p> <p>C. Moves with uniform velocity</p> <p>D. All of the above</p>
12	The energy 'E' equivalent to mass given by	<p>A. $E c^2$</p> <p>B. E / C^2</p> <p>C. E / C</p> <p>D. C^2 / E</p>
13	The length of rod at rest as measured by an observer moving parallel to it with relativistic speed is given by	<p>A. $l = l_0 \sqrt{1 - v^2/c^2}$</p> <p>B. $l = l_0 \sqrt{1 + v^2/c^2}$</p> <p>C. $l = l_0 \sqrt{1 - v^2/c^2}$</p> <p>D. $l = l_0 \sqrt{1 + v^2/c^2}$</p>

14	If a space craft of rest length ' l_0 ' is moving with a speed equal to speed of light, then its relativistic length l , will be	<p>A. $l = l_0$</p> <p>B. $l = l_0/2$</p> <p>C. $l = 0$</p> <p>D. All of these</p>
15	A rod at rest appears to an observer just a mere point when he moves across it as speed.	<p>A. Equal to the speed of light</p> <p>B. Double the speed of light</p> <p>C. Three-fourth the speed of light</p> <p>D. None of the above</p>