

## 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. <math>(m - m_0) c^2</math></p> <p>B. <math>1/2 m v^2</math></p> <p>C. <math>1/2 m c^2</math></p> <p>D. <math>1/2 (m - m_0) c^2</math></p>
2	A photon is particle of light. What is its mass when it moves with 0.9 C?	<p>A. <math>9.1 \times 10^{-31}</math> kg</p> <p>B. <math>1.67 \times 10^{-19}</math> kg</p> <p>C. <math>1.67 \times 10^{-27}</math> kg</p> <p>D. <math>0</math></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. <math>2.6 \times 10^7</math> m/s</p> <p>B. <math>1.6 \times 10^8</math> m/s</p> <p>C. <math>2.6 \times 10^8</math> 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. <math>1/15</math> of the velocity of light</p> <p>B. <math>1/20</math> of the velocity of light</p> <p>C. <math>1/10</math> of the velocity of light</p> <p>D. <math>1/25</math> 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. <math>E = c^2</math></p> <p>B. <math>E = C^2</math></p> <p>C. <math>E = C/c</math></p> <p>D. <math>C = E/c</math></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. <math>l = l_0 \sqrt{1 - V^2/C^2}</math></p> <p>B. <math>l = l_0 \sqrt{1 - V^2/C^2}</math></p> <p>C. <math>l = l_0 \sqrt{1 - V^2/C^2}</math></p> <p>D. <math>l = l_0 \sqrt{1 - V^2/C^2}</math></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

A.  $l = l_0$   
B.  $l = l_0/2$   
C.  $l = 0$   
D. All of these

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15 A rod at rest appears to an observer just a mere point when he moves across it at speed.

A. Equal to the speed of light  
B. Double the speed of light  
C. Three-fourth the speed of light  
D. None of the above