

## Physics ICS Part 1 Chapter 11 Online Test

Sr	Questions	Answers Choice
1	Relativistic velocity is of the order of.	A. <p>1/15 of the velocity of light</p> B. <p>1/20 of the velocity of light</p> C. <p>1/10 of the velocity of light</p> D. <p>1/25 of the velocity of light</p>
2	The theory of relativity was proposed in	A. <p>1920</p> B. <p>1905</p> C. <p>1915</p> D. <p>1895</p>
3	Relativistic mechanics yields results different from classical mechanics for objects moving with.	A. <p>Low velocity</p> B. <p>Velocity equal to that of sound waves</p> C. <p>Velocity greater than sound waves</p> D. <p>Velocity approaching that of light</p>
4	If a material object moves with the speed of light 'c' its mass becomes	A. <p>Equal to its rest mass</p> B. <p>Infinite</p> C. <p>Four times of its rest mass</p> D. <p>Double of its rest mass</p>
5	if the rest mass of a particle $m_0$ increased to $m$ due to its high speed then its kinetic energy is.	A. <p>( $m - m_0$ ) $c^{sup}2</sup></p>B. <p>1/2 mv^2</p>C. <p>1/2 m c^{sup}2</sup></p>D. <p>1/2 (m - m_0</sub>>0</p>$
6	The mass of an object will be doubled at the speed.	A. <p>2.6 x 10<sup>7</sup> m/s</p> B. <p>1.6 x 10<sup>8</sup> m/s</p> C. <p>2.6 x 10<sup>8</sup> m/s</p> D. <p>None of these</p>
7	The speed of beam light of a car while moving with high speed as compared to its rest position is	A. <p>Greater</p> B. <p>Less</p> C. <p>Same</p> D. <p>Zero</p>
8	If an observer is moving in the same direction as a sound wave, the velocity of the wave seems to be	A. <p>Less</p> B. <p>More</p> C. <p>Constant</p> D. <p>Sum of the two velocities</p>
9	Which one of the following physical quantities is independent of relativistic speed.	A. <p>Charge</p> B. <p>Length</p> C. <p>Mass</p> D. <p>Time</p>
10	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. <p>l = l<sub>0</sub></p> B. <p>l = l<sub>0</sub>/2</p> C. <p>l = 0</p> D. <p>All of these</p>
11	The energy 'E' equivalent to mass given by	A. <p>Ec<sup>2</sup></p> B. <p>E/C<sup>2</sup></p> C. <p>E/C</p> D. <p>C<sup>2</sup>/E</p>
12	The length of rod at rest as measured by an observer moving parallel to it with relativistic speed is given by	A. <p>l = l<sub>0</sub> [1 - $V^2/C^2$ ]</p> B. <p>l = l<sub>0</sub> 1 - $V^2/C^2</p>C. <p>l = l<sub>0</sub> / 1 - V^2/C^2</p>D. <p>l<sub>0</sub> = l<sub>0</sub> / 1 - V^2/C^2</p>$
13	A non inertial frame of reference.	A. <p>Moves with some acceleration</p> B. <p>Is always rest on earth</p> C. <p>Moves with uniform velocity</p> D. <p>All of the above</p>
		A. <p>Equal to the speed of light</p> B. <p>Double the speed of light</p>

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

- B. <p>Double the speed of light</p>
- C. <p>Three-fourth the speed of light</p>
- D. <p>None of the above</p>

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A photon is particle of light. What is its mass when it moves with 0.9 C?

- A. <p>9.1 x 10<sup>-31</sup> kg</p>
- B. <p>1.67 x 10<sup>-19</sup> kg</p>
- C. <p>1.67 x 10<sup>-27</sup> kg</p>
- D. <p>Zero</p>

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