

Physics Fsc 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	The energy 'E' equivalent to mass given by	A. <p>Ec2</p> B. <p>E/C2</p> C. <p>E/C</p> D. <p>C2/E</p>
4	A no 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>
5	A photon is particle of light. What is its mass when it moves with 0.9 C?	A. <p>9.1 x 10⁻³¹ kg</p> B. <p>1.67 x 10⁻¹⁹ kg</p> C. <p>1.67 x 10⁻²⁷ kg</p> D. <p>Zero</p>
6	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>
7	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>
8	The mass of an object will be doubled at the speed.	A. <p>2.6 x 10⁷ m/s</p> B. <p>1.6 x 10⁸ m/s</p> C. <p>2.6 x 10⁸ m/s</p> D. <p>None of these</p>
9	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>
10	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) c²</p> B. <p>1/2 mv²</p> C. <p>1/2 mc²</p> D. <p>1/2 (m - m_0) c²</p>
11	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>
12	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>
13	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>$l = l_0$</p> B. <p>$l = l_0/2$</p> C. <p>$l = 0$</p> D. <p>All of these</p>
14	A rod at rest appears to an observer just a mere point when he moves across it as	A. <p>Equal to the speed of light</p> B. <p>Double the speed of light</p>

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speed.

- C. $l = \frac{l_0}{\sqrt{1 - V^2/c^2}}$
- D. None of the above

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The length of rod at rest as measured by an observer moving parallel to it with relativistic speed is given by

- A. $l = l_0 \sqrt{1 - V^2/c^2}$
- B. $l = l_0 \sqrt{1 - V^2/c^2}$
- C. $l = l_0 \sqrt{1 - V^2/c^2} / \sqrt{1 - V^2/c^2}$
- D. $l_0 = l \sqrt{1 - V^2/c^2}$