

## Physics ICS Part 1 Chapter 11 Online Test

Sr	Questions	Answers Choice
1	Relativistic velocity is of the order of.	A. $\frac{1}{15}$ of the velocity of light B. $\frac{1}{20}$ of the velocity of light C. $\frac{1}{10}$ of the velocity of light D. $\frac{1}{25}$ of the velocity of light
2	The theory of relativity was proposed in	A. 1920 B. 1905 C. 1915 D. 1895
3	Relativistic mechanics yields results different from classical mechanics for objects moving with.	A. Low velocity B. Velocity equal to that of sound waves C. Velocity greater than sound waves D. Velocity approaching that of light
4	If a material object moves with the speed of light 'c' its mass becomes	A. Equal to its rest mass B. Infinite C. Four times of its rest mass D. Double of its rest mass
5	If the rest mass of a particle $m_0$ increased to $m$ due to its high speed then its kinetic energy is.	A. $(m - m_0)c^2$ B. $\frac{1}{2}mv^2$ C. $\frac{1}{2}mc^2$ D. $\frac{1}{2}(m - m_0)c^2$
6	The mass of an object will be doubled at the speed.	A. $2.6 \times 10^7$ m/s B. $1.6 \times 10^8$ m/s C. $2.6 \times 10^8$ m/s D. None of these
7	The speed of beam light of a car while moving with high speed as compared to its rest position is	A. Greater B. Less C. Same D. Zero
8	If an observer is moving in the same direction as a sound wave, the velocity of the wave seems to be	A. Less B. More C. Constant D. Sum of the two velocities
9	Which one of the following physical quantities is independent of relativistic speed.	A. Charge B. Length C. Mass D. Time
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. $l = l_0$ B. $l = \frac{l_0}{2}$ C. $l = 0$ D. All of these
11	The energy 'E' equivalent to mass given by	A. $Ec^2$ B. $\frac{E}{C^2}$ C. $\frac{E}{C}$ D. $\frac{C^2}{E}$
12	The length of rod at rest as measured by an observer moving parallel to it with relativistic speed is given by	A. $l = l_0 [1 - \frac{V^2}{C^2}]$ B. $l = l_0 \sqrt{1 - \frac{V^2}{C^2}}$ C. $l = \frac{l_0}{1 - \frac{V^2}{C^2}}$ D. $l = l_0 \sqrt{1 - \frac{V^2}{C^2}}$
13	A non-inertial frame of reference.	A. Moves with some acceleration B. Is always rest on earth C. Moves with uniform velocity D. All of the above

A. Equal to the speed of light  
B. Double the speed of light

14	A rod at rest appears to an observer just a mere point when he moves across it as speed.	<p>B. <math>\times 2</math> the speed of light</p> <p>C. <math>\frac{3}{4}</math> the speed of light</p> <p>D. None of the above</p>
15	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. Zero</p>