

# Jashore University of Science and Technology

Bachelor of Science Electrical and Electronic Engineering

1st semester of 1st year

Course no. : PHY 1101

Course title : Physics

Class test no. : 01

Date : March 01, 2023

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1. Write down the postulates of the special theory of relativity. [5]

2. If the speed of light were smaller than it is, would the relativistic phenomena be more or less conspicuous than they are now? [3]

3. A meter stick moving with respect to an observer appears only 500 mm long to her. What is its relative speed? [6]

4. A particle has a kinetic energy 20 times its rest energy. Find the speed of the particle in terms of  $c$ . [6]