



TEST PAPER: PHYSICS

Time: 45 Minutes

Class: I.C.S.E. 8

Max. Marks: 30 Marks

Date: 5th September 2018

Marking Scheme: All questions carry 10 marks each. Subparts (A) and (B) carry 3 marks each and subpart (C) carries 4 marks.

Question 1:

A. Fill in the blanks:

- i) 1 calorie = _____ Joules
- ii) 1 horse power = _____ watt
- iii) SI unit of energy is _____

B. Answer the following:

- i) State the factors affecting the amount of work done
- ii) At what speed a body of 1 kg will have kinetic energy of 1J?
- iii) Define 1 calorie.

C. Answer the following

- i) What are the two kinds of mechanical energy? Explain.
- ii) A truck of mass 1000 kg increases its speed from 36 km/h to 72 km/h. Find the increase in its kinetic energy.

Question 2.

A. Give example of following:

- i) Electrical energy to sound energy
- ii) Heat energy to electrical energy
- iii) Solar energy to heat energy
- iv) Electrical energy to heat energy
- v) Chemical energy to mechanical energy
- vi) Light energy to chemical energy

B. Answer the following:

- i) With the help of pendulum demonstrate conversion of kinetic and potential energy.
- ii) What is law of conservation of energy?

C. Solve:

- i) A bucket of water of mass 17.25 kg is lifted from the ground level to a height of 7m of a building. What will be the potential energy of this bucket of water at this height? Take $g = 9.8 \text{ m/s}^2$.
- ii) An electric geyser of 1500 w power is used for half an hour in a day. What is the energy consumed during this time?

Question 3.

A. Answer the following:

- i) List different sources of energy. Why solar energy is preferred over other forms of energy?
- ii) What are fossil fuels?
- iii) Define power. State it SI unit.

B. Name the energy possessed by:

- i) a moving cricket ball
- ii) a compressed spring
- iii) a piece of stone placed on the roof

C. Answer the following:

- i) Study the following situations and state in which cases work is said to be done
 - a) A person pushing hard a huge rock but rock does not move
 - b) A bullock pulling a cart up to 1km on road
 - c) A girl pulling a trolley for about 2m distance
 - d) A person standing with a heavy bag on his head