



TEST PAPER: PHYSICS

Time: 45 Minutes

Class: C.B.S.E. 9

Max. Marks: 30 Marks

Date: 31st October 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:

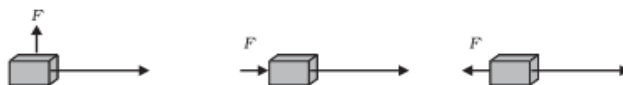
- Fill in the blanks:
 - Work done when the force acting on the body and displacement produced in the body are at right angles to each other is _____
 - Work done = _____ X _____
 - Power is defined as rate of doing _____
- Answer the following:
 - A force of 5 N is acting on an object. The object is displaced through 2 m in the direction of the force. Calculate work done.
 - A porter lifts a luggage of 15 kg from the ground and puts it on his head 1.5 m above the ground. Calculate the work done by him on the luggage.
 - What is commercial unit of energy?
- Define kinetic energy. Derive expression for kinetic energy.

Question 2:

- Fill in the blanks:
 - 1 kwh = _____ Joules
 - SI unit of power is _____
 - A boy lifts a luggage from height 2m to 4m. The potential energy will become _____
- Answer the following:
 - What are various energy transformations that occur when you are riding a bicycle?
 - Define one watt power
 - A certain household has consumed 250 units of energy during a month. How much energy is this in joules?
- A pump is used to lift 100 kg of water from a well 60m deep in 20s. If force of gravity on 1kg is 10N find:
 - Work done by the pump
 - Potential energy stored in the water
 - Power spent by the pump
 - Power rating of the pump.

Question 3:

- In each of the following a force, F is acting on an object of mass, m . The direction of displacement is from west to east shown by the longer arrow. Observe the diagrams carefully and state whether the work done by the force is negative, positive or zero giving proper



- Solve:
 - Calculate the work required to be done to stop a car of 1500 kg moving at a velocity of 60 km/h?
 - A moon is revolving around the earth in a circular path. How much work is done by the moon?
- Answer the following:
 - State two factors on which the kinetic energy of a moving body depends.
 - A boy has to do work 300 J for time 0.5 min to lift a luggage on the roof of a bus. How much power does he spend?