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JSUNIL TUTORIAL

PUNJABI COLONY GALI 01

9th Work and Energy

I. One marks question

1. Define kinetic energy.
2. What is potential energy
3. What will be the work done by a force if displacement of the body is zero?
4. When is work done on a body positive?
5. Can energy be converted from one form to another?

2 marks questions

1. A constant force of 10N displaces a body through 5 m. Find the work done by the force?
2. What will be the work done if a stone of mass 2 kg is raised through a height of 10cm?
3. What are the conditions needed for work to be done?
4. An object of mass 10kg is moving with speed 4 m/sec. What is the kinetic energy of the object
5. An electric bulb of 60w is used for 5 hours a day. Calculate the energy consumed in one day by the tube?

3 marks questions

1. An object of mass 10kg is at a certain height above the ground. If the potential energy of the object is 200j find the height of the object from the ground?
2. A body of mass5 kg is kept on a table. If it is displaced by a force of 10N by 2 m on the table on the same horizontal line, find the work done by the gravitational force
3. A ball of mass 2kg is kept on a tower of height 30m. Find its potential energy at this point. If it is allowed to fall freely, find its kinetic energy when it just touches the ground
4. What is law of conservation of energy prove it ?(3 Marks)
5. A man of mass 50kg climbs a tower of height 45m in 5 seconds with the help of a rope. Find the power of the man?

5 marks questions

1. If in an office, 10 tubes of 40W, 5 fans of 75W and 2 ACs of 1500W are used for 8 hours a day. Calculate the energy consumed per day in commercial units of energy.)
2. Prove that the kinetic energy of a body moving with speed v is equal to$1/2mv^2$