LITTLE FLOWER SCHOOL, RAPTINAGAR, GORAKHPUR
ANNUAL EXAMINATION 2020 - 2021

Class: VIII **Time: 2 Hours**
Physics **Max Marks: 100**

SECTION - A

I. Choose the correct answer: **[5×1=5]**

1) 9.8 J is equal to:
   (a) 1 Nm (b) 9.8 dyne cm (c) 1 kgf × m (d) 9.8 gf × cm
2) The expression of power P is:
   (a) P = mgh (b) P= ½ mv^2 (c) P=F × d (d) P=F × d/t
3) When a body doubles its speed, its K.E. becomes:
   (a) half (b) double (c) four times (d) no change
4) When switch of an electric appliance is put off, it disconnects:
   (a) the live wire (b) the neutral wire
   (c) the earth wire (d) the live and the neutral wires
5) The conductor of electricity is:
   (a) wood (b) water (c) glass (d) ebonite

II. Define the following: **[5×2=10]**

1) Electroscope
2) Power
3) Joule
4) Dissipation of energy
5) Mechanical energy

III. Match the following: **[5×1=5]**

1) Energy	insulator
2) Blowing wind	746 W
3) 1 H.P.	volt
4) Potential difference	joule
5) Silk	kinetic energy

IV. Give reason for: **[5×2=10]**

1) Two balloons rubbed with same wool repel each other.
2) Conductors allow electricity to pass through them.
3) An ordinary copper wire must not be used as fuse wire.
4) A coolie does no work while standing with a heavy box on his head.
5) A stretched rubber band has potential energy.

V. Answer in one word: **[5×1=5]**

1) 1 kilowatt hour is equal to
2) Moving arms of a clock
3) In household circuits, we use A.C. power at
4) Which wire is used to provide the return path from appliance to source?
5) The cap of gold leaf electroscope is made up of which metal?

SECTION – B

VI. Answer any six out of the following eight: [6×10=60]

1) a) State the energy changes in the following while in use:
i) A loudspeaker ii) An electric motor iii) photocell
iv) Electric toaster v) Steam engine
b) A body when acted upon by a force of 10 kgf moves to a distance 0.5 m in the direction of force. Find the work done by the force.

2) a) Give an example to explain the energy conversion to illustrate the law of conservation of energy.
b) A bullet of mass 20 g has its kinetic energy equal to 400 J. Find the speed of the bullet.

3) a) Differentiate between potential and kinetic energy along with an example.
b) A body of mass 4 kg is moving with a velocity of 4m/s. Find the ratio of its initial and final kinetic energy, if its mass is doubled and velocity is tripled.

4) a) What do you understand by the following term?
i) short circuiting ii) overloading
b) A pump is used to lift 100 kg of water from a well 80 m deep in 40 second. If force of gravity on 1 kg is 10 N, find:
i) work done by the pump ii) P.E. stored in the water
iii) power spent by the pump iv) power rating of the pump.
State the assumptions if any.

5) a) State five precautions to be taken while using electricity.
b) An electric bulb of 100 W, an electric iron of 750 W and a T.V. of 100 W are used for 3 hours a day. Calculate the energy consumed per day.

6) a) What is an electric fuse? State its purpose in the household electrical circuit. State any 2 characteristics of a fuse.
b) An electrical appliance of power1.5 kW is used for 6 hours each day. Find:
i) The electrical energy consumed in kWh, each day.
ii) The electrical energy consumed in 60 days.
iii) The cost of the electrical energy consumed in 60 days at the rate of Rs.6.25per kWh.

7) a) Draw a labelled diagram of a gold leaf electroscope. How will you use a gold leaf electroscope to find out whether a body is charged or uncharged?
b) An electric iron of power 2.5 kW is used for 30 minutes to iron the clothes. Calculate the electrical energy consumed in:
i) kilowatt hour ii) joule

8) a) State five safety measures that you will observe in a thunderstorm.
b) In a premises 6 bulbs of each of 100 W, 3 fans each of 60 W, 2 A.Cs each of 1.5 kW are used for 5 Hour per day. Find:
i) total power consumed per day,
ii) total power consumed in 30 days,
iii) total electrical energy consumed in 30 days,
iv) the cost of electricity at the rate of Rs 7 per unit.

VII. Internal Assessment [5]