



Unit 7 • Energy in Daily Life: forms of energy and heat

Name _____ Class _____ Roll no. _____ Date _____ Marks _____ / 30

1 Key words

[4]

Fill in the blanks with words from the box. Two words in the box are not needed. Each blank carries 0.5 mark.

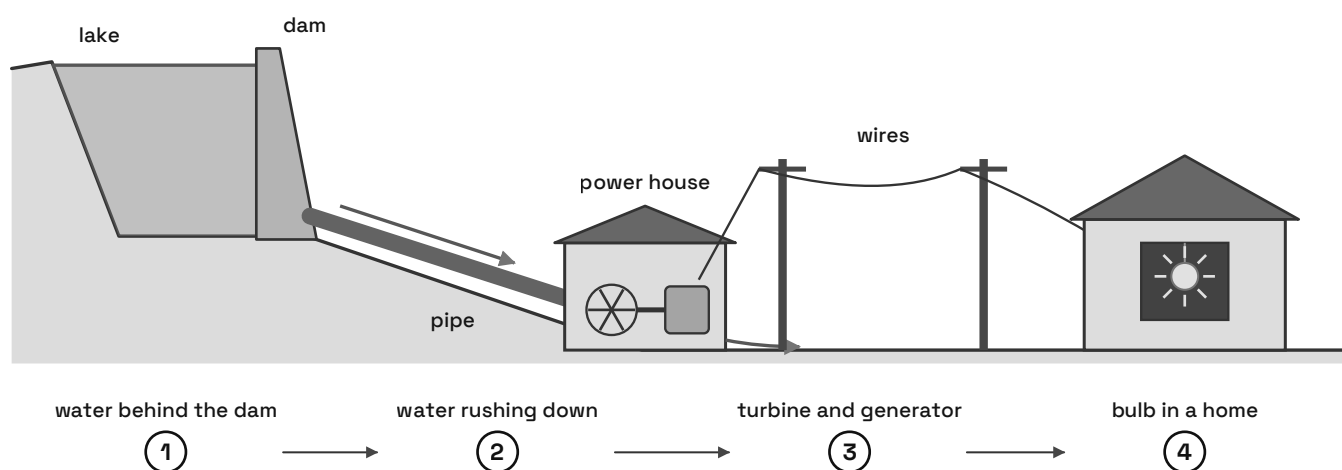
energy forest joule kinetic energy less lower mechanical energy more newton
potential energy

The capacity to do work is called _____, and its SI unit is the _____. The energy a body has because of its motion or position is called _____. Water stored in a reservoir has _____, and a moving vehicle has _____. Heat always flows from a body at a higher temperature to a body at a _____ temperature. A larger surface area absorbs _____ heat, and white objects absorb _____ heat.

2 Label the diagram

[2]

The diagram shows how energy changes form in a hydropower plant. Write the form of energy at each of the places numbered 1 to 4. Each carries 0.5 mark.



1. _____

2. _____

3. _____

4. _____



[5]

Choose the correct option for each of the following questions.

- i. Which of these has kinetic energy? [1]
 - a. a stretched spring
 - b. still water in a pond
 - c. a leg lifted to kick a football
 - d. a flying bird
- ii. Read these statements about energy: (1) Energy cannot be destroyed. (2) Energy cannot be created. (3) Energy cannot be changed from one form to another. Which is correct? [1]
 - a. only (1) is true
 - b. (1) and (2) are true
 - c. (1), (2) and (3) are true
 - d. none is true
- iii. What energy change happens in an electric fan? [1]
 - a. kinetic energy into electrical energy
 - b. electrical energy into kinetic energy
 - c. heat energy into light energy
 - d. light energy into electrical energy
- iv. Which is the correct way heat flows? [1]
 - a. from a big body to a small body
 - b. from a cold body to a hot body
 - c. from a body at a lower temperature to a body at a higher temperature
 - d. from a body at a higher temperature to a body at a lower temperature
- v. Which would warm up fastest in the sun? [1]
 - a. water in a white glass
 - b. water in a black glass
 - c. water in a white plate
 - d. water in a black plate

[2]

Write “true” or “false” after each statement. Each carries 0.5 mark.

- When we touch an object hotter than our skin, heat flows from the hot object into the skin.
- When we touch an object colder than our skin, heat flows from the cold object into the skin.
- The heat absorbed decreases when the surface area increases.
- A black object absorbs less heat.

[3]

Write very short answers to the following questions.

- a. State the law of conservation of energy. [1]

- b. What energy change happens in a solar panel? [1]

- c. What is heat absorption? [1]



6 Short answers

[8]

Write short answers to the following questions.

a. Define kinetic energy and potential energy.

[2]

b. On which factors does the kinetic energy of a body depend?

[2]

c. Give a reason: white clothes are more comfortable than black ones in summer.

[2]

d. Give a reason: bedding is spread out in the sun in winter.

[2]

7 Long answer

[4]

Write a long answer to the following question.

Ramesh puts equal amounts of water in a black plate, a white plate, a black glass and a white glass, and leaves them in the sun for an hour.

i. In which will the water be hottest? (1)

ii. In which will it be least hot? (1)

iii. Explain your answers using the two factors that affect heat absorption. (2)



8 Think

[2]

Think, then answer.

“The food we eat is also a form of the sun’s energy, transformed.” Explain this statement.

9 Activity: Appliances that change energy (Activity 7.6)

(not marked)

Find these appliances at home or at school. Write the form of energy that goes in and the form that comes out.

Appliance	Energy that goes in	Energy that comes out
electric bulb		
electric heater		
radio		
torch		
LP gas stove		

