

1. Which one of the following correctly describes the conversion of energy during photosynthesis?

- (1) Electrical energy to light energy
- (2) Light energy to chemical potential energy
- (3) Kinetic energy to electrical energy
- (4) Electrical energy to chemical potential energy

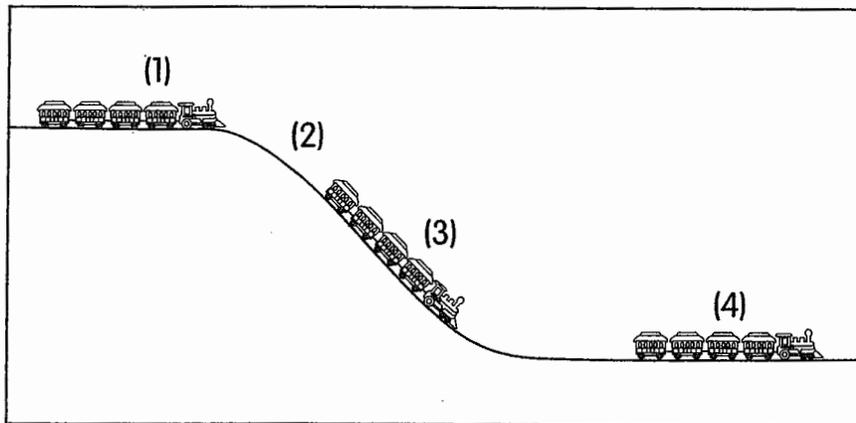
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2. Which of the following systems shows a change from chemical potential energy to electrical and light energy?

- (1) A burning candle
- (2) A fireworks display
- (3) An electric oven heating up
- (4) A car battery causing the headlights to shine

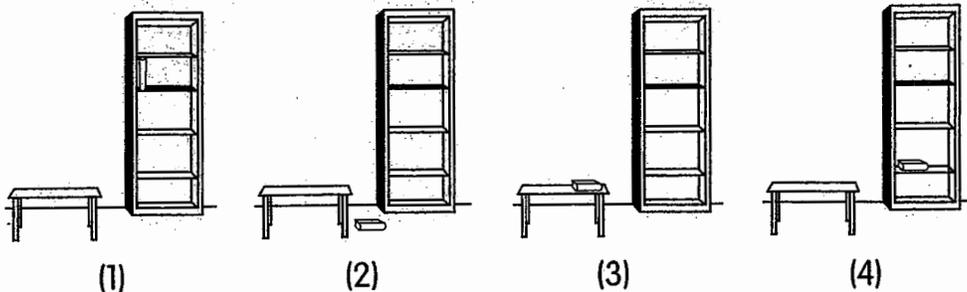
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3. At which position does the train have the least gravitational potential energy?



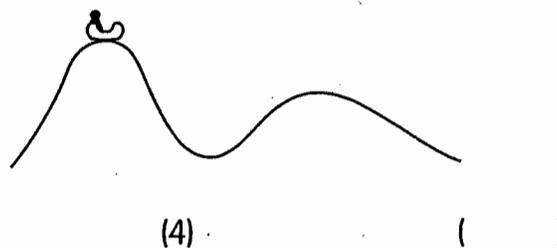
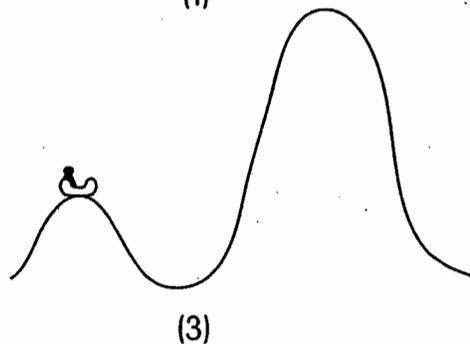
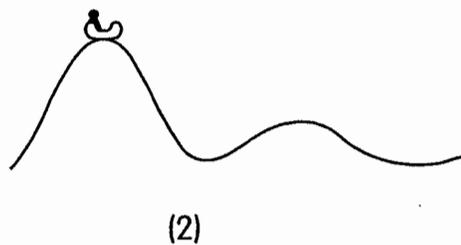
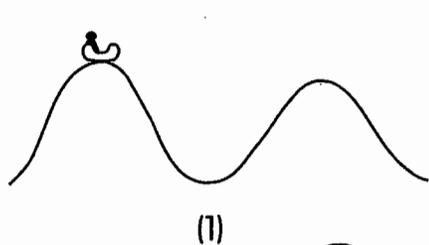
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4. Which book has the greatest gravitational potential energy?



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5. Which of the following roller coasters will **not** have enough kinetic energy at the base of the first hill to travel over the second hill?



6. Which of the following forms of energy is/are released by the Sun and can be detected by our eyes?

- A. Light energy
- B. Heat energy
- C. Sound energy
- D. Chemical potential energy

- (1) A only
 - (2) A and B only
 - (3) C and D only
 - (4) A, B and D only
- ()

7. The energy that causes seawater to form water vapour comes from the _____.

- (1) Sun
 - (2) clouds
 - (3) waves in the sea
 - (4) living things in the sea
- ()

8. Which of the processes listed below, show the conversion of solar energy to chemical potential energy?

- (1) Tides generating electricity
 - (2) Wind causing windmills to spin
 - (3) Green plants making their own food
 - (4) Burning of coal to produce heat to boil water
- ()

9. Which of the following activities involve(s) kinetic energy?



A



B



C



D

- (1) C only
- (2) A and C only
- (3) B and D only
- (4) A, C and D only

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10. An athlete runs up a flight of stairs and stops once he reaches the top of the stairs.



What forms of energy does the athlete now possess?

- (1) Sound energy and heat energy
- (2) Kinetic energy and gravitational potential energy
- (3) Kinetic energy and sound energy
- (4) Gravitational potential energy and heat energy

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11. A policeman fired his gun. Which of the following forms of energy were involved when the bullet was fired from the gun?

- A. Heat energy
- B. Sound energy
- C. Kinetic energy
- D. Chemical potential energy

- (1) A and B only
- (2) C and D only
- (3) A, B and C only
- (4) A, B, C and D

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12. Which of the following statements about energy are true?

- A. Energy can be stored.
- B. Energy can be created.
- C. Energy can be used to do work.
- D. Energy can be converted from one form to another.

- (1) A and C only
- (2) B and D only
- (3) A, C and D only
- (4) A, B, C and D

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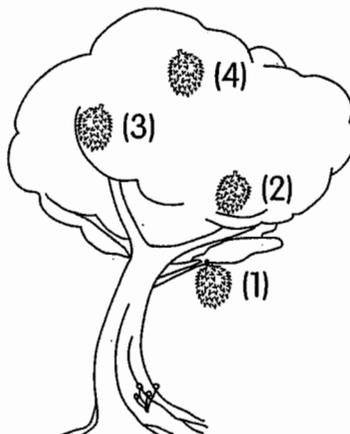
13. What are the energy changes taking place in the activity shown in the diagram below?



- (1) Chemical potential energy \rightarrow kinetic energy \rightarrow heat energy
- (2) Kinetic energy \rightarrow heat energy \rightarrow gravitational potential energy
- (3) Gravitational potential energy \rightarrow kinetic energy \rightarrow heat energy
- (4) Gravitational potential energy \rightarrow kinetic energy \rightarrow gravitational potential energy

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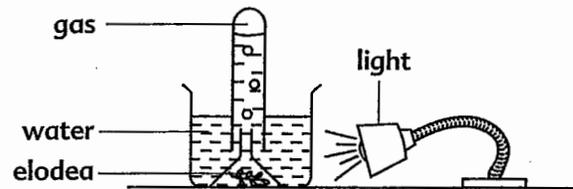
14. The diagram below shows four durian fruits on a tree.



Which durian fruit has the most gravitational potential energy?

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15. Meena wanted to find out the effect of light on the rate of photosynthesis in elodea, which is an aquatic plant. Which of the following variables should she keep constant to make sure that the test is fair?

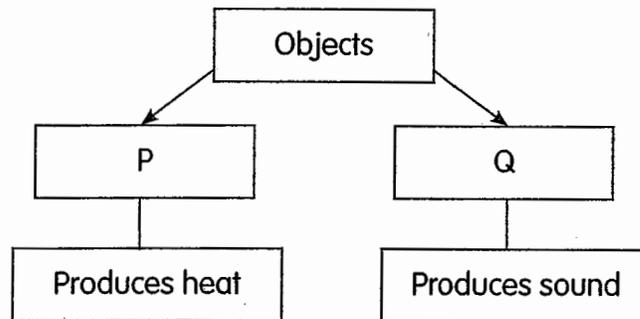


- A. Amount of light
- B. Amount of water
- C. Duration of the experiment
- D. Type of container used to contain the plants

- (1) A and C only
- (2) B and D only
- (3) B, C and D only
- (4) A, B, C and D

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16. Study the graphic organiser below carefully.



Which of the following correctly describes objects P and Q?

	Object P	Object Q
(1)	Plug	Bell
(2)	Battery	Ear plug
(3)	Magnet	Chopstick
(4)	Burning candle	Violin

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17. Green plants make food through the process of photosynthesis. Which of the following energy conversions represents photosynthesis?

- (1) Light energy \rightarrow heat energy
- (2) Light energy \rightarrow chemical potential energy
- (3) Heat energy \rightarrow chemical potential energy
- (4) Chemical potential energy \rightarrow heat energy

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18. Four toy cars of the same mass, A, B, C and D, were allowed to run for 8 m. The time taken for each toy car to travel the distance was recorded.

Toy car	Time taken (min)
A	2.5
B	2
C	1
D	3.5

Which toy car has the least amount of kinetic energy?

- (1) A
- (2) B
- (3) C
- (4) D

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19. The diagram below shows some of the energy conversions that take place when a food blender is used.



What does X represent?

- (1) Sound energy 1.0%
- (2) Sound energy 0.1%
- (3) Light energy 1.0%
- (4) Chemical potential energy 0.1%

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20. Which of the following forms of energy are produced when a candle is lighted?



- A. Heat energy
- B. Light energy
- C. Sound energy
- D. Chemical potential energy

- (1) A and B only
- (2) C and D only
- (3) B, C and D only
- (3) A, B, C and D

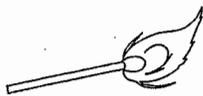
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21. When a car stops moving, what form of energy is most of its kinetic energy converted into?

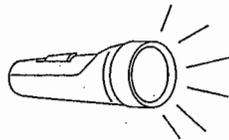
- (1) Heat energy
- (2) Light energy
- (3) Sound energy
- (4) Potential energy

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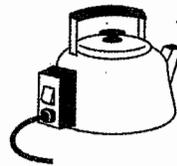
22. Which of the following shows the conversion of chemical potential energy into electrical energy?



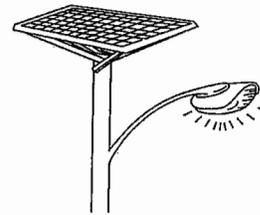
(1)



(2)



(3)



(4)

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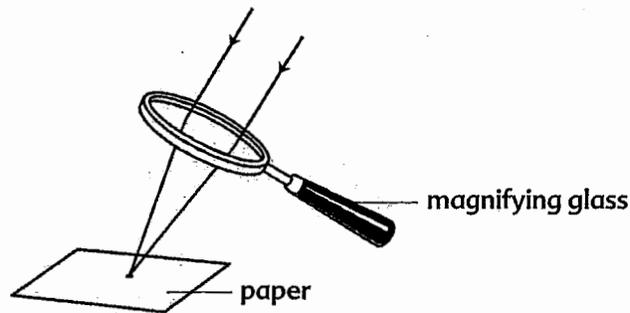
23. Which of the following statements about energy are correct?

- A. Potential energy is stored in an object.
- B. Electrical energy makes all things work.
- C. Heat energy makes us feel warm or hot.
- D. Kinetic energy is found in moving things.

- (1) A and B only
- (2) C and D only
- (3) A, B and D only
- (4) A, C and D only

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24. Study the diagram below carefully. It was observed that after a few minutes, a burn mark appears on the paper.

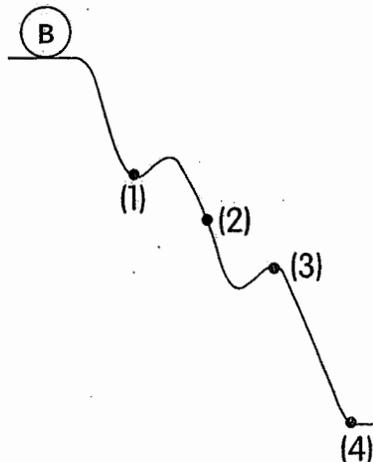


Which of the following energy conversions is correct?

- (1) Heat energy \rightarrow light energy
- (2) Light energy \rightarrow heat energy
- (3) Solar energy \rightarrow light energy
- (4) Light energy \rightarrow chemical potential energy

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25. The diagram below shows a ball rolling down a hill. At which point does ball B have half its maximum gravitational potential energy?



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