

Scientific Aptitude

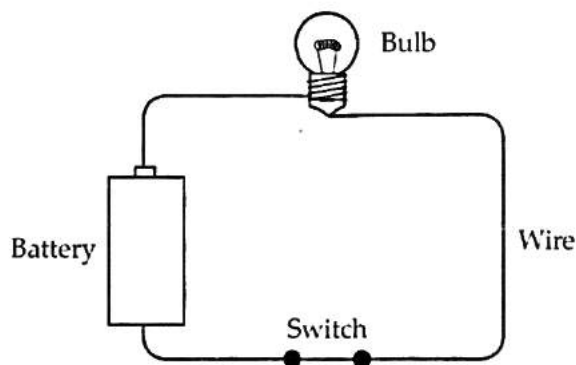
Sources of Energy

Skill Based Questions

Q.1. Multiple choice questions:

Directions: Given below are two columns - column I and column II. Match the two columns and write the correct answer in the given blank grid.

1. In power station, the energy conversion is from __i__ to __ii__ and then to __iii__ energy.
Which row completes the given statement?
- (a) i-Mechanical, ii-Heat, iii-Electrical (b) i-Heat, ii-Mechanical; iii-Electrical
(c) i-Heat, ii-Electrical, iii-Mechanical (d) i-Mechanical, ii-Electrical, iii-Heat
2. Sanjana set up the circuit shown below. She knew that energy had to change from one form to another for the bulb to light up.

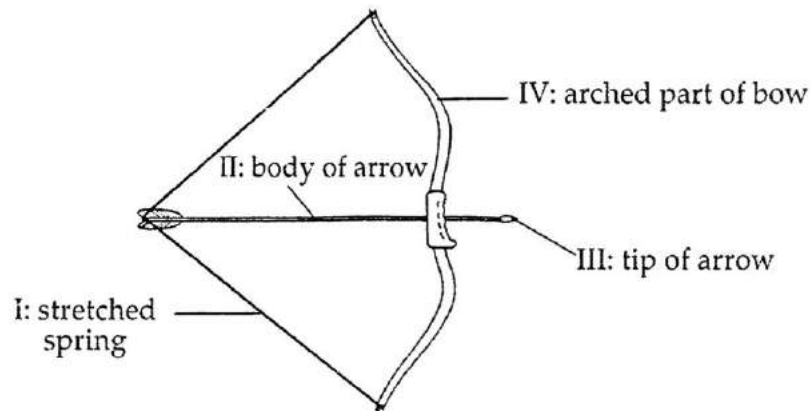


What one of the following shows the energy change correctly?

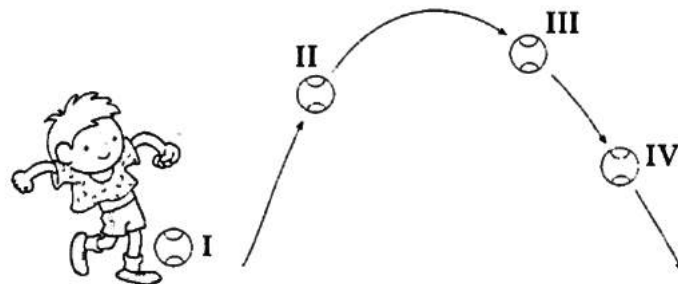
- (a) Electrical energy → Chemical energy → Heat energy → Light energy
(b) Heat energy → Stored energy → Light energy
(c) Chemical energy → Electrical energy → Heat energy → Light energy
(d) Stored energy → Chemical energy → Light energy

3. Sanjeev participated in an archery contest. He released the arrow shown in the diagram below, at a great speed.

The arrow's kinetic energy was converted from energy stored in



- (a) I only (b) IV only (c) I and II only (d) I, II and IV only
4. Study the given diagram. At which point does the ball have the least gravitational energy?



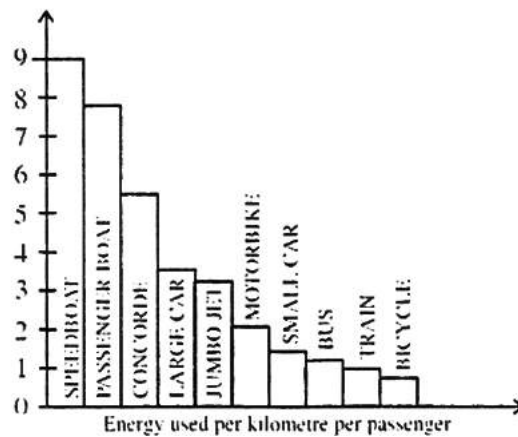
- (a) I (b) II (c) III (d) IV

Q.5. Subjective questions:

1. (i) Give two ways of conserving energy in the home.
(ii) Give two ways of conserving energy in offices and industry.

Ans.
.....
.....

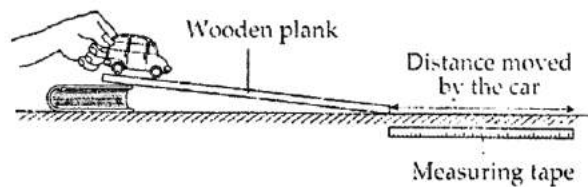
2. Study the given graph. The graph shows the energy used up per person for various means of transport.



- (i) Which is the most efficient means of transport?
(ii) Why does the government want to encourage the use of public transport like buses and trains?

Ans.
.....
.....

3. Study the given set up.



Shyam wanted to find out if the height of the ramp affects the distance that the toy car travelled after reaching the bottom of the ramp. Which of the following variables should be changed or kept constant for a fair test?

Tick (✓) your answers in the table below. Give reason in support of your answer.

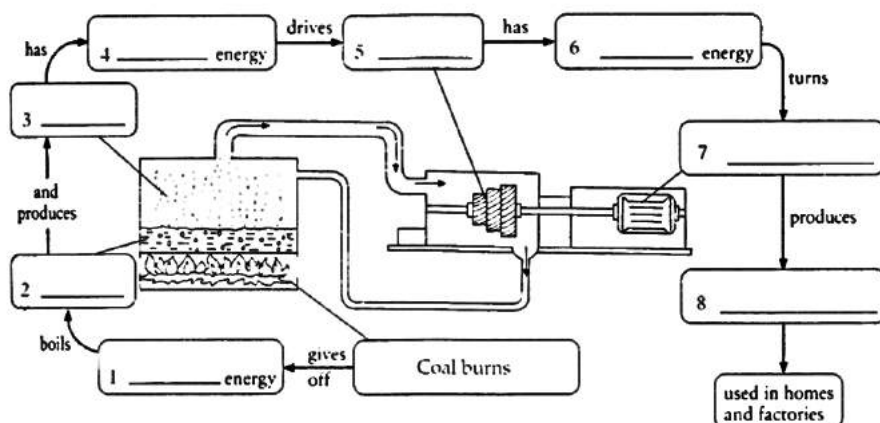
Variables	To be kept constant	To be changed
Type of toy car		
Starting point		
Method of release		
Height of ramp		

Ans.

.....

.....

4. The given diagram shows how energy is produced for use in homes and factories. Study the diagram and fill in the blank boxes.

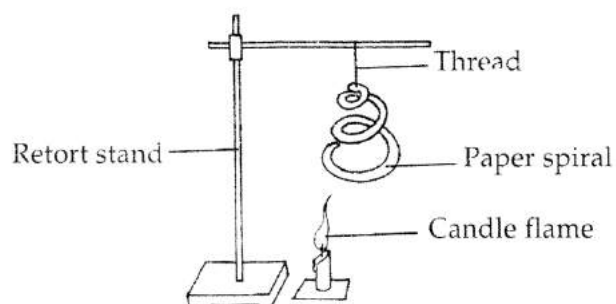


Ans.

.....

.....

5. Study the given set up.



- What do you observe?
- What form of energy is produced by burning candle?
- How does the form of energy in (ii) cause the observation in (i)?

Ans.

.....

.....