

Q.3, Name five different forms of energy :-

- 1. Mechanical Energy
- 2. Heat Energy
- 3. Light Energy
- 4. Chemical Energy
- 5. Sound energy
- 6. Magnetic energy
- 7. Electrical energy
- 8. Atomic Energy

Q.4) What are the two kinds of mechanical energy?

- (i) Potential energy
- (ii) Kinetic energy

Q.5) What is potential energy? State its unit.

Ans) Potential energy of a body is the energy possessed by it due to its state of rest or position. The S.I. unit of potential energy is joule.

Q.6) Give one example of a body that has potential energy, in each of the following: (i) due to its position (ii) due to its state

(i) Potential energy due to position: When a ball is released from the top of the building it has potential energy stored in it.

(ii) Potential energy due to state: When the spring is compressed or stretched the potential energy is stored in a spring.

7 State two factors on which the potential energy of a body at a certain height above the ground depends.

Ans a) The mass of the body  
b) Height above the ground.

8) Two ~~mass~~ bodies A and B of masses 10 kg and 20 kg respectively are at the same height above the ground. Which of the two has greater potential energy?

Ans) Body B

9) A bucket full of water is on the first floor of your house and another identical bucket with same quantity of water is kept on the second floor. Which of the two has greater potential energy?

Ans) Bucket 2.

10) Define the term kinetic energy. Give one example of a body which possesses kinetic energy.

Ans) Kinetic energy of a body is the energy possessed by it due to its state of motion. E.g. the flowing water of water bodies.

11) State 2 factors on which the kinetic energy of a moving body depends.

Ans) Mass and speed.

12) Two toy cars A and B of masses 500g and 200g respectively are moving with the same speed. Which of the two has greater kinetic energy?

Ans) Car A.

13) A cyclist doubles his speed. How will his kinetic energy change: increases, decreases or remains the same.

Ans) increases.

14) Name the form of energy which a wound up watch spring possesses.

Ans) Potential

15) Can a body possess energy even when it is not in motion? Explain your answer with an example.

Ans) A body possesses potential energy when it is not in motion. E.g. → A hammer at a height has potential energy stored in it. The hammer has this energy because of its position at a height.

- 16) Name the type of energy (kinetic or potential) possessed by the following:
- |      |   |           |
|------|---|-----------|
| i)   | A moving cricket ball.                    | Kinetic   |
| ii)  | A stone at rest on the top of a building. | Potential |
| iii) | A compressed spring.                      | Potential |
| iv)  | A moving bus.                             | Kinetic   |
| v)   | A bullet fired from a gun.                | Kinetic   |
| vi)  | Water flowing in a river.                 | Kinetic   |
| vii) | A stretched rubber band.                  | Potential |

17) Give one example to show the conversion of potential energy to kinetic energy when put in use -

Ans) The potential energy possessed by the stone at a height changes into its kinetic energy when it falls -