Simple Machines

A. Choose the Correct Answer:

1. Which of the following is a type of simple machine?

- a) Engine
- b) Lever
- c) Computer
- d) Generator

2. What is the purpose of a simple machine?

- a) To make work more difficult
- b) To reduce effort and make work easier
- c) To increase the weight of an object
- d) To slow down work

3. Which simple machine consists of a flat surface set at an angle?

- a) Pulley
- b) Wedge
- c) Inclined plane
- d) Screw

B. Fill in the Blanks:

- 1. A ______ is a simple machine made of a wheel with a rope used to lift heavy objects.
- 2. An inclined plane reduces the effort needed by increasing the ______ over which the force is applied.
- 3. A wedge is used to ______ objects apart or cut them.

C. Case Study:

Rohan was helping his father in the garden.

- They used a wheelbarrow to carry soil from one place to another.
- His father explained that the wheelbarrow works as a simple machine by reducing the effort needed to lift and transport the load.
- Later, they used a ramp (inclined plane) to push a heavy cart into the shed.
- Rohan noticed that it was easier to push the cart up the ramp than to lift it directly.

Case Study Questions:

- 1. What simple machine did Rohan and his father use to transport soil?
- 2. How did the wheelbarrow reduce the effort required?
- 3. What simple machine was used to push the cart into the shed?
- 4. Why was it easier to push the cart up the ramp rather than lift it directly?

D. Short Answer Questions:

- 1. What is a simple machine?
- 2. Name two examples of simple machines.
- 3. How does an inclined plane make work easier?

E. Long Answer Questions:

- 1. Explain the different types of simple machines with examples.
- 2. How do simple machines reduce effort and make work easier?
- 3. Describe how a pulley and a lever function as simple machines with practical examples.