Friction and its ways to reduce

A. Choose the Correct Answer:

1. What is friction?

A) A force that helps objects move faster

B) A force that slows down or stops moving objects

C) A type of magnetism

D) A push or pull without any effect

2. Which of the following surfaces will produce the most friction?

A) Ice

B) Smooth glass

C) Rough sandpaper

D) Polished floor

3. How can we reduce friction?

A) By making surfaces rougher

B) By applying oil or grease

C) By increasing weight on the object

D) By rubbing surfaces together harder

B. Fill in the Blanks:

1. Friction is a force that occurs when two _____ touch or rub against each other.
2. Using _____ and grease can help in reducing friction between moving parts.
3. Friction helps us to _____ while walking, otherwise, we would slip.

C. Case Study:

Rohan and Meena were playing with toy cars on different surfaces. Rohan rolled his toy car on a smooth tiled floor, while Meena rolled hers on a rough carpet. They noticed that Rohan's car moved farther than Meena's. Curious about this, they asked their science teacher, who explained how friction affects movement.

After conducting an experiment, they found:

- The car moved farthest on the smooth surface.
- The car moved the least on the rough carpet.
- Adding oil on the surface made the car move even farther.

Case Study Questions:

1. What role did friction play in Rohan and Meena's experiment?
2. Why did Rohan's car move farther than Meena's?
3. How did adding oil change the movement of the toy car?
4. Why is reducing friction important in machines and vehicles?

D. Short Answer Questions:

1. What is friction, and where do we see it in daily life?
2. Why do vehicles use oil or grease in their parts?
3. How does friction help us in walking?

E. Long Answer Questions:

1. Explain the effects of friction with examples of how it is useful and how it can be a problem.
2. Describe different ways in which friction can be reduced and why it is necessary.
3. How does friction affect different activities like cycling, driving, and writing?