

# **St. Andrews Scots Sr. Sec. School**

9th Avenue, I.P. Extension, Patparganj, Delhi – 110092

Session: 2025-2026 – Answer Key

**Class: VIII**

**Subject: Science**

**Chapter: Friction**

## **CHECK POINT 1**

1.(T) 2. (F) 3. (T) 4. (T)

## **CHECK POINT 2**

1.Friction 2. Lubricant 3. Ball bearing 4. Talcum powder 5. Polishing

## **CHECK POINT 3**

1.fluids 2. friction 3. streamlined

## **PRACTICE TIME**

### **A. Tick (✓) the correct answer:**

1. (b) 2. (a) 3. (a) 4. (d) 5. (c)

### **B. Assertion-Reason Type Questions:**

1. (a) 2. (b) 3. (a) 4. (d)

### **C. Say True or False:**

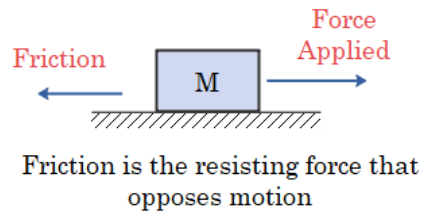
1. (T) 2. (F) 3. (T) 4. (F) 5. (T)

### **D. Very Short Answer Type Questions:**

1. Skiing
2. Friction is caused due to the adhesion of the two surfaces in contact.
3. The force required to continue moving or sliding an object is sliding friction.
4. Spring balance.
5. Machine oil and grease.

### E. Short Answer Type Questions:

1. Friction pulls the objects in a direction opposite to the motion and slows them down, for example, a ball rolling on a floor slows down after moving some distance.



2. Yes, friction is advantageous as well.

- The friction helps to hold the objects in place. We can write or walk on a surface because of friction.
- It helps us to hold the objects.
- It transforms the energy of a moving body into heat and sound energy.

3. We need to increase friction sometimes in order to have a good grip over slippery surface by making the surface rough.

4. The system of metal balls in a slot or socket is called ball bearing. It is used to minimise the friction between rotating or revolving parts of a machine.

5. Ships have streamlined shape. Streamlined shape reduces friction due to water and ships can flow past easily and smoothly. Aeroplanes also have streamlined shape.



Objects which are made to move in the fluid are made streamlined shape to reduce friction offered by fluid

**Streamlined shapes helps in reducing fluid friction**

## **F. Long Answer Type Questions:**

1. The factors that affect friction are:

(a) Nature of the two surfaces in contact. Friction is more on rough surfaces than on smooth ones. For example, a ball rolling on a tiled floor travels longer distance than on a cemented floor due to lesser friction between the tiled floor and the ball.

(b) Mass of the sliding object. The object which has more mass, develops more friction. For example, more force is required to push or pull a box having more mass than a same type of box having less mass.

2. Kabaddi players rub their hands with soil to make them rough so as to have a good grip on the player of other team. Friction helps us pick up a glass of water to drink water, walk on smooth surfaces, pushing and pulling things, fix a nail in the wall and to sit on the benches or chair in the classroom.

3. The friction of bookshelf with the floor can be reduced by putting rollers under the shelf. This will help to shift the self easily.

4. 'Fluids exert friction on a body' can be shown by following activity:

Procedure: Take a coin and keep it on a tabletop. Hit it with your finger. Now, spill half a teaspoon of water on the tabletop and put the coin over it. Hit it again.

Observation: The coin moves smoothly on dry tabletop and goes to a longer distance. When water is spilled on the tabletop, the coin moves slowly and goes to a short distance.

Conclusion: This activity shows that water exerts friction on a body that moves through it.

## **G. HOTS Questions:**

1. The handles of motorcycles are covered with a rubber sheet having spikes on it for increasing friction between palm and handles to provide a good grip to the driver.

2. A drop of water sticks to the surface of the glass because of friction working between the glass surface and water.

3. By rubbing hands together, heat generates due to friction between palms and they become warm.

4. (i)–(b), (ii)–(d), (iii)–(a), (iv)–(c)

**H. Science Quiz/Puzzle:** 1. FLUID 2. STREAMLINE 3. SPRING BALANCE 4. DRAG  
5. ROUGH 6. BIRDS 7. ADHESION 8. LUBRICANT

## **J. Value-based Questions:**

1. Roughness of surfaces in contact as well as mass of the sliding object affect the friction.

2. Monu will help the labourer more because his method will reduce the friction.

3. Sonu and Monu are helpful and kind person.