

CHAPTER # 5

FORCES AND MACHINES

4) State advantage and disadvantage of friction.

Advantages

- I. Friction between feet or shoes and ground helps us to walk
- II. Friction keeps the wheels of vehicle on road.
- III. Friction between wheel disk and brakes help to stop vehicle.
- IV. Friction helps us to write on paper.

Disadvantages

- I. Friction wears down parts of machine.
- II. Friction wears away surface of tyres and soles of shoes.

5) Suggest some methods to reduce friction.

- I. By polishing surfaces of the objects

II. By oiling and lubricating the moving parts of machines and vehicles.

III. By converting sliding into rolling friction

IV. By using ball bearings. .

6) What do the cyclists and the swimmers do to reduce friction?

Cyclists use very narrow and hard tyres in their bicycles to reduce friction.

The Swimmers acquire streamlined shape to reduce water friction.

7) Describe how lever makes work easier by giving examples of its uses from everyday life.

Lever is a simple machine which turns about fixed position. When a force is applied at one end of the lever, it turns about the fixed point to lift the load.

Scissors, pliers, claw hammer, door and staplers etc are the examples of the levers.

13) Why does it become dangerous to walk on a wet or polished smooth floor?

Because the friction is very low on wet or polished smooth floor, and we can slip on the floor.