

## Chapter-3 Synthetic Fibres and Plastics

**Question:** Explain why some fibres are called synthetic.

**Answer:** Synthetic fibres are called synthetic because they are made by human beings. So it also called man-made fibres. They are made by chemical reaction or by combining different chemicals.

**Question:** Give examples which indicate that nylon fibres are very strong.

**Answer:-** Nylon is used for making parachutes and ropes for rock climbing. This indicates that nylon fibres are very strong.

**Question:-** Explain why plastic containers are favoured for storing food.

**Answer:-** Plastics seems most convenient for the storage of food, water and milk. This is because of their light weight, lower price, good strength and easy handling.

**Question:-** Explain the difference between thermoplastic and thermosetting plastics.

**Answer:-**

**Thermoplastic:-** This plastic can be easily heated and melted easily. It is used for making floortiles, kitchenwares, switches, etc. Eg:- Polythene and PVC.

**Thermosetting plastic:-** This plastic can moulded only once and cannot be melted on heating again. It is used for making toys, combs and containers. Eg:- Bakelite and Melamine.

**Question:-** Explain why the following are made of thermosetting plastics.

**Answer:-**

**Saucepan:-** Saucepan handles are made up of thermosetting plastic because it is a poor conductor of heat.

**Electric plugs/switches/plug boards:-** *Electric plugs/switches/plug boards are made out of thermosetting plastic because it is a poor conductor of heat.*

**Question:-** *Categorise the materials of the following products into 'can be recycled' and 'cannot be recycled'.*

*Telephone instruments, plastic toys, cooker handles, carry bags, ball point pens, plastic bowls, plastic covering on electrical wires, plastic chairs, electrical switches.*

**Answer:-**

**Materials that can be recycled:-** *Plastic bowls, plastic toys, carry bags, plastic covering on electrical wire, ball point pen, carry bags, plastic chairs.*

**Materials that cannot be recycled:-** *Telephone instrument, cooker handles, electrical switches.*

**Question:** *Rana wants to buy shirts for summer. Should he buy cotton shirts or shirts made from synthetic material? Advise Rana, giving your reason.*

**Answer:-** *Rana should buy cotton shirts for summer. This is because cotton is a comfortable fabric as it allows air to pass through it, which keeps the body cool. They are also light and can last longer.*

**Question:** *Give examples to show that plastics are noncorrosive in nature.*

**Answer:-** *Plastics are noncorrosive in nature as they does not react with water and air. For example, metals like iron get rusted when left exposed to moisture and air whereas plastics does not react with water and air when kept in open. They are used for the storage of various kinds of materials including many chemicals.*

**Question:** *Should the handle and bristles of a tooth brush be made of the same material? Explain your answer.*

**Answer:-** *No, the handle and bristles of a tooth brush should not be made of the same material. This is because, the bristles helps in the cleaning and brushing teeth for which it has to be flexible and soft. So that each and every corner of the teeth and mouth could be cleaned easily. On the other hand, the handle is used to hold the bristle part or the neck for easy cleaning. It should be made from hard material to handle the bristle.*

**Question: 'Avoid plastics as far as possible'. Comment on this advice.**

**Answer:-** *Plastics are non-biodegradable materials. Which means they cannot be degraded by the microorganisms. Since it takes several years to decompose, it is not environment friendly. It causes environmental pollutions. Besides, the burning process in the synthetic material is quite slow and it does not get burnt easily. In the process it releases lots of poisonous gas into the atmosphere causing air pollution. Thus, it is advisable to avoid the use of plastics as far as possible.*

**Question: 'Manufacturing synthetic fibres is actually helping conservation of forests'. Comment.**

**Answer:-** *Synthetic fibres are man-made fibres. It is produce by different chemicals. Whereas natural fibres are derived from plants, trees or animals. As natural fibres are produced from plants, they minimize the number of them. When synthetic fibres will be used more than natural ones, the trees could be saved. When synthetic fibres would be made popular, the forest would be conserved. So it helps in the conservation of forests.*