1) **Explain why some fibres are called synthetic.**
Answer:
Some fibres are called synthetic fibres because they are made by man using chemicals.

2) **Mark (✓) the correct answer**.
Rayon is different from synthetic fibres because
(a) it has a silk-like appearance.
(b) it is obtained from wood pulp.
(c) its fibres can also be woven like those of natural fibres.
Answer:
(b) it is obtained from wood pulp.

3) **Fill in the blanks with appropriate words.**
(a) Synthetic fibres are also called ____ or ____ fibres.
(b) Synthetic fibres are synthesised from a raw material called _____
(c) Like synthetic fibres, plastic is also a _____
Answer:
(a) man-made, artificial fibres
(b) petrochemicals
(c) polymer

4) **Give examples which indicate that nylon fibres are very strong**.
Answer:
The following examples indicate that nylon fibres are very strong.
(i) They are used for making parachutes and ropes for rock climbing.
(ii) They are used in making seat-belts, fishing nets, tyre cord, a string for sports rackets and musical instruments.

5) Explain why plastic containers are favoured for storing food.
Answer:
Plastic containers are favoured for storing food because of the following reasons:
(i) the plastics do not react with the food stored in them.
(ii) the plastics are lightweight and are strong.
(iii) they are easy to handle and safe.

6) **Explain the difference between thermoplastic and thermosetting plastics.**
Answer:

Thermoplastics

They do not lose their plasticity.

These plastics softened on heating and can be bent easily.

Examples are polyethene, PVC, etc.

Thermosetting plastics

They lose their plasticity.

These plastics when moulded once, can't be softened again.

Examples are bakelite and melamine

7) **Explain why the following are made of thermosetting plastics**.
(a) Saucepan handles
(b) Electric plugs/switches/plugboards
Answer:
(a) Since, thermosetting plastics are a bad conductor of heat and do not get heated up while cooking, they are used for making saucepan handles.
(b) Since thermosetting plastics are a bad conductor of electricity and the electric current does not pass through such plastics, they are used for making electric plugs/switches/plugboards.

8) **Give examples to show that plastics are non-corrosive in nature**.
Answer:
The literal meaning of non-corrosive is resistant to get destroyed by chemical action.
Following are the examples that show that plastics are non-corrosive in nature.

Plastic containers do not react with items stored in it.

They do not get rusted when exposed to moisture and air.

They do not decompose when left in open for a long period.

9) **Should the handle and bristles of a toothbrush be made of the same material? Explain your answer**.

Answer:

No, the handle and bristles of a toothbrush should not be made of the same material. This is because our gums are soft and the bristles should be made of soft material so that it does not harm the gums. On the other hand, the handles should be made up of hard material so that it can give a firm grip.

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

Answer:

Plastics must be avoided as far as possible. The materials made of plastics are non-biodegradable. The use of plastics has a bad effect on the environment. When the plastics are burnt, it releases a lot of poisonous fumes into the atmosphere causing air pollution. These plastic materials when eat up by the animals (like cows), choke their respiratory system. This can cause death of these animals. The waste plastic articles thrown here and there carelessly get into dirty water drains and sewers, and block them. In a nutshell, plastics can be considered a threat to our environment.

Manufacturing synthetic fibres is actually helping the conservation of forests'. Comment.

Answer:

In the manufacturing of synthetic fibres, we use only chemical substances and no natural materials, thus, in turn, we conserve forests.

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12) Describe an activity to show that thermoplastic is a poor conductor of electricity.

Answer:

Arrange a circuit as shown in the given figure. Leave a gap between two ends of the wire. Place a ther-moplastic in the gap. Observe the bulb.

between two ends of the wire. Place a ther-moplastic in the gap. Observe the bulb.

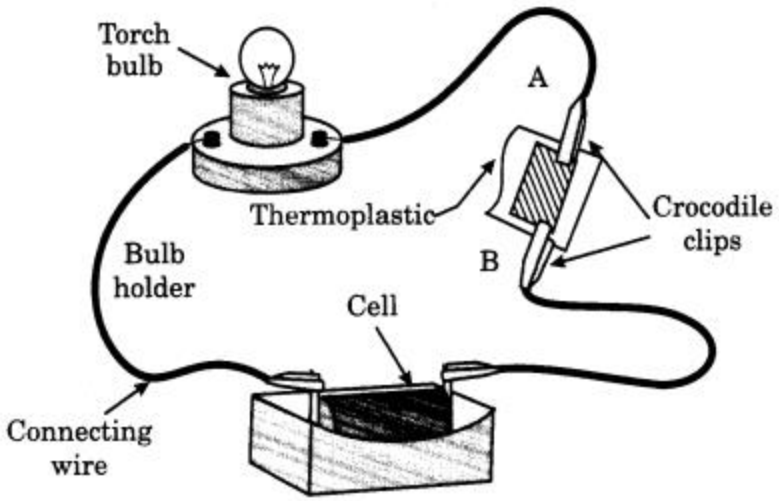

Fig. 3.4 *An electric circuit to test materials for their electric conductance*