



D. Short-Answer questions:

3. These days clothes made out of a mixture of synthetic fibres and natural fibres are more popular than those made purely out of synthetic fibres. Discuss the reason for this.

Ans: Clothes made of synthetic fibre are not very comfortable to wear in the hot and humid weather, these clothes stick to the body and make us feel uncomfortable. But they are crease-resistant and dries faster, whereas natural fibre cotton is very comfortable during summer months to wear. Thus, now-a-days both types of fibres are blended to make new clothes like terycot made up of terylene and cotton; terrywool made up of terylene and wool.

5. Plastics are very useful materials. Why there is concern today about their increasing use?

- i) They are non-biodegradable, i.e. they cannot be decomposed by the microorganisms in the soil
- ii) Careless disposal of them chokes drains, chokes the soil and hinders the absorption of water by the soil.
- iii) If eaten by animals, they may be killed.
- iv) Plastic bags can also contaminate foodstuffs because of poisonous dyes getting absorbed into food.
- v) If burnt, they release poisonous fumes and pollute the air.

E 1. How is rayon made? Why is it called artificial silk? List its important properties and uses.

Ans: Rayon is made from wood pulp. Wood pulp is first dissolved in an alkaline solution. The thick liquid produced is then passed through tiny holes to make fibres. The fibres are hardened by passing them into a bath of sulphuric acid. The fibres are then spun into yarn and woven into cloth.

Rayon can be woven like silk fibres and is cheaper than silk. Thus, it is called artificial silk.

Properties of Rayon:

- i) Rayon is stronger and easier to dye in a variety of colours.
- ii) It absorbs sweat. Therefore, it is comfortable to wear in summers.

Uses of Rayon:

Refer Textbook pg.no 38

2. List and explain four properties of plastics. Give one use of plastics linked to each of these properties.

Four properties of plastics and the use linked to these properties are mentioned below:

- i) **Thermal conductivity:** Plastics are poor conductors of heat. Therefore, they are used to make handles of cooking utensils.
- ii) **Electrical conductivity:** Plastics are poor conductors of electricity. Therefore, they are used to make coating of electrical appliances.
- iii) **Solubility in water:** Plastics are insoluble in water. Therefore, they are used to make buckets to store water.
- iv) **Reactivity:** Plastics do not react with water and air. They are non-reactive and do not corrode easily. Therefore, articles made of plastics are used to store chemicals and other materials.

HOTS question:

1. No. Because rayon is made from wood pulp and not from synthetic materials. It therefore burns like plant materials such as cotton fibre.
2. Burning cotton smells like burning paper whereas burning wool smells like burning hair because cotton and paper are made from plant source whereas wool and hair are animal fibres.
3. Non-biodegradability: This property of plastics makes them very useful as they last a long time; also it makes them an environmental hazard as plastics disposed off are not decomposed by Microorganisms .

4. Clay is said to be a plastic material as it can be moulded into different shapes. However it is not a polymer.

5. Nylon clothes can catch fire very readily. They are easily inflammable. Therefore, Ankit's father told him not to wear nylon clothes in the kitchen.