**SYNTHETIC FIBRES AND PLASTICS**

**4. GIVE REASONS FOR EACH OF THE FOLLOWING:**

1. **Plastics should not be burnt.**

**Ans**: Plastics should not be burnt because on burning it releases harmful or toxic gases.

1. **Handles of utensils are made up of Bakelite.**

**Ans**: Handles of utensils are made up of Bakelite because it is bad conductor of heat.

1. **Avoid wearing synthetic clothes while working in the kitchen.**

**Ans**: We should avoid wearing synthetic clothes while working in the kitchen because it is made up of artificial fibre which catches fire easily.

1. **Handles of heating pans are made up of plastics.**

**Ans**: Handles of heating pans are made up of plastics because they are bad conductor of heat and allow very little heat to pass through them.

1. **Electric wires are covered with plastics.**

**Ans**: Electric wires are covered with plastics because plastics do not allow electric current to pass through them i.e., Insulator.

1. **Plastics are used to store different kinds of materials.**

**Ans**: Plastics are used to store different kinds of materials because plastics do not react with water or other simple chemicals. They are light, strong, durable and do not corrode.

**5. VERY SHORT ANSWER TYPE QUESTIONS:**

1. **What is the process of joining together of monomers to form a polymer called ?**

**Ans**: Polymerisation

1. **Which synthetic fibre is also called artificial silk ?**

**Ans**: Rayon

1. **Give an example of thermoplastic.**

**Ans**: Polythene, PVC, polystyrene, etc.

1. **Which type of plastic cannot be remoulded repeatedly ?**

**Ans**: Thermosetting plastics

1. **Which artificial fibre is also called spandex ?**

**Ans**: Lycra

**6. SHORT ANSWER TYPE QUESTIONS:**

1. **Define polymer.**

**Ans**: Synthetic fibres are made of a chain of small units called monomers. Many monomers join together to form a larger unit called polymer.

1. **What is a synthetic fibre ?**

**Ans**: Fibres that are manufactured in factories from chemical substances are called synthetic fibres. For example: nylon, rayon, etc.

1. **Write one use of thermoplastics.**

**Ans**: **Some uses of thermoplastics are as follows:**

1. Polythene is used for making plastic bags, container for storing water and oil, pipes for transporting water.
2. PVC is used for making floor tiles, shoe soles, shoes, pipes, raincoat, bags, etc.
3. **What is Teflon ?**

**Ans**: Teflon is used for making non-stick cookwares and as corrosion proof coating in chemical industry.

1. **Write the full form of PVC. Give one use of PVC.**

**Ans**: The full form of PVC is Polyvinyl chloride. It is used for making floor tiles, shoe soles, shoes, pipes, raincoat, bags, etc.

**7. LONG ANSWER TYPE QUESTIONS:**

1. **Write any three properties of (i) nylon (ii) polyester (iii) acrylic**

**Ans**:

1. **Nylon:**

* It is elastic in nature and does not lose its strength even after repeated use.
* It is light in weight, strong and durable.
* It absorbs very little water and dries up quickly.

1. **Polyester:**

* It does not get wrinkled.
* It is strong and light in weight.
* It can be dyed in different colours.

1. **Acrylic:**

* It is soft and light in weight.
* It is easy to wash and dries quickly.
* It does not shrink, stretch or wrinkle.

1. **List the properties of plastics.**

**Ans**: **Some important properties of plastics are as follows: -**

1. **Plastics are non-reactive:** Plastics do not react with water or other chemicals.
2. **Plastics are light and strong:** It is light in weight so it can be easily carried from one place to another and they are long lasting.
3. **Plastics are bad conductor of heat:** Plastics allow very little or no heat to pass through them and hence are used to make handles or electric irons, heating pans, etc.
4. **Plastics are poor conductors of electricity:** Plastics do not allow electric current to pass through them.
5. **Plastics are of different shapes:** Plastics can be easily moulded into different shapes and they are cheaper than other materials.
6. **Distinguish between thermoplastics and thermosetting plastics.**

**Ans**:

|  |  |
| --- | --- |
| **Thermoplastics** | **Thermosetting Plastics** |
| **1.** They can be reshaped or remoulded as many times as possible. | **1.** They cannot be reshaped even on heating. |
| **2.** They become soft and get deformed on heating. | **2.** They do not melt or become soft on heating. |
| **3.** Example: PVC and polythene. | **3.** Example: Melamine and Bakelite. |

1. **Why are plastics considered an environmental hazard ? Give reasons in support of your answer.**

**Ans**: **Plastics are considered as an environmental hazard because of the following reasons:**

1. Plastics are non-biodegradable, hence do not decay.
2. Dumping plastics in waterbodies poses a threat to aquatic life.
3. Burning plastics release toxic gases which cause air pollution.
4. Plastics bags carelessly thrown on the roads find way into drains, which choke drains and sewage system.
5. Plastics bags thrown in garbage, with food in them are sometimes consumed by animals like cows. This may choke their respiratory system and lead to death.
6. If plastics remain in the soil for a long time, they block the seepage of rainwater through the soil.

**EXTRA QUESTION:**

1. **Explain the advantages and disadvantages of synthetic fibres.**

**Ans**: **Advantages of Synthetic Fibres:**

1. They have tensile strength and can thus, withstand heavy loads.
2. They regain their original shape after stretching or compressing.
3. They are easy to wash, maintain and dry quickly.

**Disadvantages of Synthetic Fibres:**

1. They do not absorb moisture and sweat.
2. They catch fire easily and melt before burning.
3. They cling to the skin as they accumulate electric charge on them.