

Long Answer Questions

Q. 1. Write the importance of synthetic polymers in our life. [NCERT Exemplar]

Ans. Synthetic fibres are important in our life because of multiple uses.

Nylon

- a. Nylon is widely used in women's hosiery and lingerie. It is used in carpeting materials and upholstery fabrics because it is easy to clean.
- b. The fabric is also used in life vests, umbrellas, sleeping bags and tents.
- c. As industrial product, nylon fabric is used as seat belts, tire cords, ballistic cloth and tow ropes because of its strength and good elasticity.

Acrylic

It is used to make sweater, blankets, shawls, etc.

Rayon

- a. Rayon is used to make containers, car upholstery, etc.
- b. It is used to make carpets, tyre lands.
- c. It is used to make surgical dressings.

PET

PET is used to make bottles, utensils, films, wires, etc.

Q. 2. Despite being very useful it is advised to restrict the use of plastic. Why is it so? Can you suggest some methods to limit its consumption? [NCERT Exemplar]

Ans. Plastic is a non-biodegradable material and as such it causes land pollution. At the same time burning such materials in the form of garbage causes serious air pollution. Some ways to limit its consumption are:

- a. Reducing the use of plastics. Whenever possible use paper bags instead of plastic bags.
- b. Reusing it for some other purpose thereby decreasing its consumption.
- c. Recycling of plastic. It requires the plastic to be collected, sorted, chopped, melted and remoulded.

Q. 3. Write an activity to show that synthetic fibres are stronger than the cotton fibres. [NCERT Exemplar]

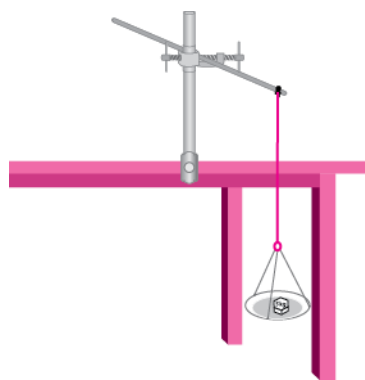
Ans. Take an iron stand with a clamp and a cotton thread of about 65 cm length. Tie the thread to the clamp so that it hangs freely as shown in figure. At the free end suspend a pan so that weight can be placed in it.

Add weight one by one till the thread breaks.

Note down the total weight required to break the thread. This weight indicates the strength of the fibre.

Repeat the same activity with threads of wool, silk and nylon.

You will observe that the weight required to break the threads of wool, silk and nylon is more than cotton. So, synthetic fibres are stronger than cotton.



Q. 4. Distinguish between natural fibres and synthetic fibres.

Ans.

S.No.	Natural fibres	Synthetic fibres
(i)	These fibres are naturally obtained from plants and animals.	These fibres are made by man in factories.
(ii)	For example, cotton, silk, etc.	For example, rayon, polyester, etc.