

Topic Synopsis

Synthetic Fibres – Types and Characteristics

Synthetic fibres:

Synthetic fibres are the fibres made by man through various chemical processes. These fibres are made from polymers. Monomers are the small units that form polymers. Polymerisation is the process of forming polymers.

Types of Synthetic Fibres

The different types of synthetic fibres are as follows:

- **Rayon:**

- It is the first synthetic fibre.
- It was obtained from a naturally occurring polymer called cellulose commonly known as wood pulp.
- Even though rayon is obtained from a natural polymer, yet it is considered as a synthetic fibre because cellulose needs extensive chemical treatment to form rayon. It was developed as a cheap alternative to silk fibre.
- It is also known as artificial silk because it has silk-like appearance.
- Rayon can be dyed into various colours and when mixed with wool, it can be used to make carpet and on mixing with cotton, it can be used to make bedsheets.



- **Nylon:**

- It was the world's first completely synthesised fibre.
- In 1931, it was produced from coal, air and water.
- Many articles like toothbrush, socks, tents, parachutes, ropes for rock climbing, etc. are made from nylon. Nylon thread is even stronger than a steel wire.



- **Polyester:**

- It is the most widely used synthetic fibre in the world.
- Polyester is a long chain polymer of a chemical substance called ester.
- Fabrics made of polyester never wrinkles and are easy to wash.
- PET bottles and other articles are also made from a familiar form of polyester.



- **Acrylic:**

- Sweaters, shawls or blankets can be made from another type of synthetic fibre called 'acrylic'.
- It has wool-like feel.
- It is used as a cheaper alternative to wool.



Characteristics of Synthetic Fibres:

- Dry up quickly
- Durable
- Less expensive
- Readily available
- Easy to maintain