

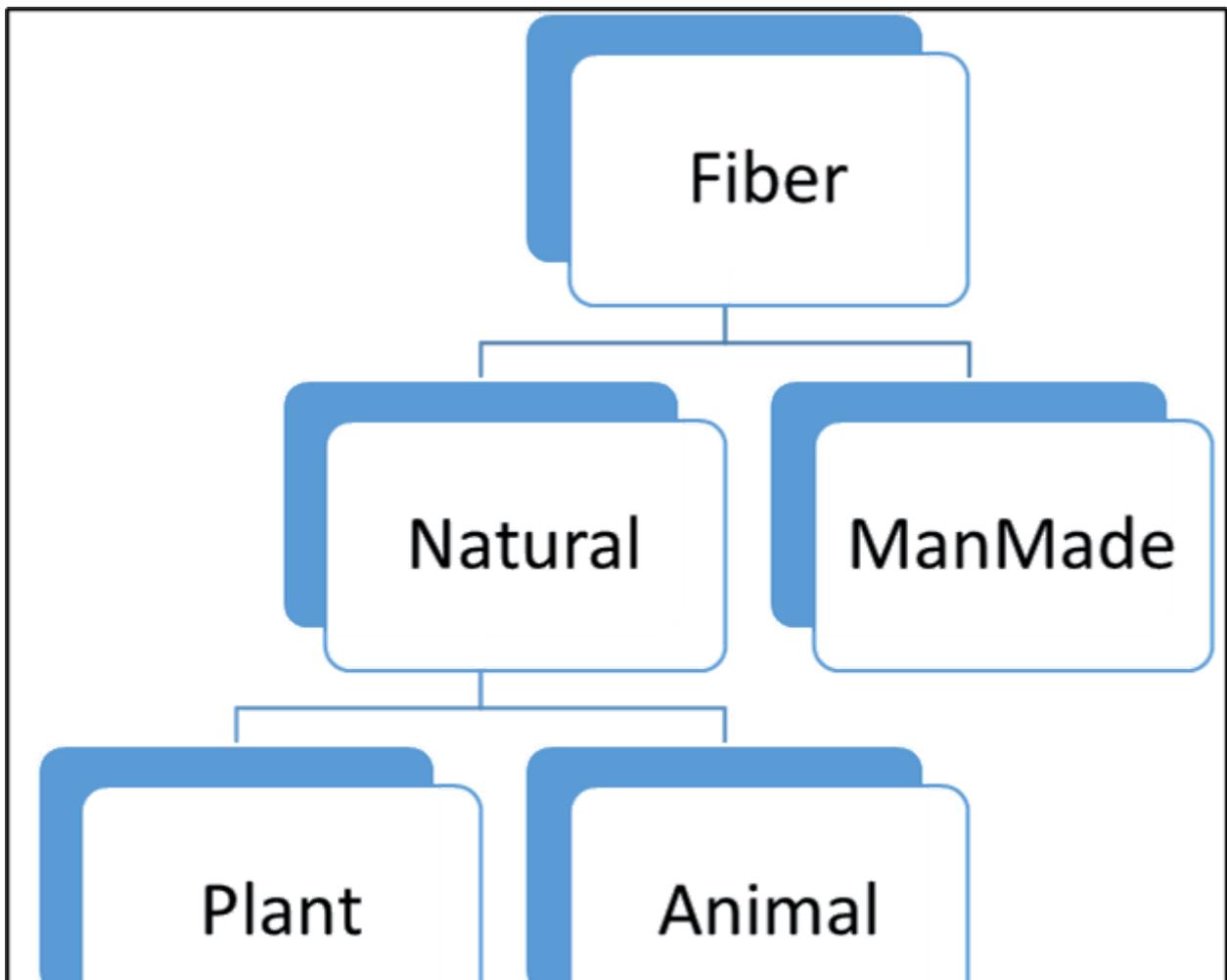
FlexiPrep

Synthetic Fibres and Natural Fibres, Advantages of Using Natural Fibers, Examples, Questions (For CBSE, ICSE, IAS, NET, NRA 2022)

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What Are Fibres?

Fibres are thread-like structures that are long, thin and flexible. These may be spun into yarns and then made into fabrics. There can be different types of fibres. On the basis of their origin, fibres are classified as **natural fibres** and **synthetic fibres**.





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Classification of Fibres

Natural Fibres

Natural fibres are the fibres that are obtained from plants, animals or mineral sources. Some of the examples are cotton, silk, wool etc. Natural fibres can again be divided into two types based on their source i.e., plants and animals.

Examples of Natural Fibres

Animal Fibres

These are the fibres that are obtained from animals. For example, Wool, silk etc.

- **Wool:** Wool is a natural textile fibre obtained from sheep, goats and camels. It traps a lot of air. Air is a bad conductor of heat. This makes clothes made from wool useful in winter.
- **Silk:** Silk is also a natural textile fibre which is obtained from silkworms. The rearing of silkworm to obtain silk is known as sericulture.

Plant Fibres

These are the ones that are obtained from plants. These fibres are extracted from the plants to make fabrics.

- **Cotton:** It is one of the plants fibres that are used to make clothes. It is a soft staple fibre that is found as a boll around the seeds in a cotton plant.
- **Jute:** It is a vegetable fibre that is soft, shiny and is spun into coarse strong threads.

Synthetic Fibres

- Synthetic fibres are the man-made polymers designed to make a fabric. Polymers are obtained when many small units are joined together chemically.
- Some of the examples of synthetic fibres are:
 - **Rayon:** It is made from wood pulp. It is also known as artificial silk as it has characteristics resembling silk.
 - **Nylon:** It was the first synthetic fibre. It is used in the making of ropes, sleeping bags, parachutes, different types of clothes, etc. It is one of the strongest fibres known to us.

Advantages of Synthetic Fibres

- They can be washed and dried quickly.
- They are easy to maintain.

They are cheaper than natural fibres.

- Easily available.
- Do not wrinkle easily and are very durable.

Advantages of Using Natural Fibers

Natural fibers are popular for many different reasons, as the fabric is generally more environmentally friendly and durable.

- **Absorbent.** Natural fibers have an incredibly high absorbency, as the fibers, both plant and animal, have a strong affinity for water. This makes natural fibers a great option for bed sheets and towels, as absorbency is an important factor for these items because they're used to dry surfaces and receive regular use.
- **Eco-friendly.** Natural fibers usually have a smaller environmental impact than synthetic fibers because natural fibers do not use as many chemicals during the production process. Some natural fibers are less eco-friendly than others because some plants require more water.
- **Durable.** Due to the structure of cellulose, which makes up natural materials, most plant-based fibers are very strong. Animal-based fibers, like silk and wool, are also strong.

Examples of Natural Fibers

- **Silk:** Silk is a natural fiber produced by insects as a material for their nests and cocoons. The most common type of silk is made by silkworms. Silk is made primarily of a protein called fibroin and is known for its shine and softness as a material.
- **Wool:** Wool is a textile from the hair of sheep, goats, alpacas, llamas, and other animals. Different wool fabrics include cashmere, angora, mohair, and more. Wool is a very warm, absorbent, and durable fiber. It is water-resistant, thanks to the lanolin oils from the animals, and it is generally used to make outerwear and cold weather clothes like sweaters and coats.
- **Cotton:** Cotton fabric is made from plant fibers from the cotton plant. Cotton is primarily composed of cellulose, an insoluble organic compound crucial to plant structure, and is a soft and fluffy material. Cotton fabric is soft and durable and often used to make t-shirts and undergarments. Types of cotton fabric are organic cotton, denim, and canvas.
- **Linen:** Linen fabric is a strong, lightweight fabric made from the flax plant. Linen is naturally hypoallergenic and is very breathable, making it a great textile for warm weather clothes.
- **Jute:** Jute is a coarse natural plant fiber from the jute plant that is used to weave fabrics like burlap cloth. Jute is a popular textile to make rugs and burlap sacks.

Questions

What is the Difference between Natural Fibre and Synthetic Fibre?

Answer:

Natural fibers are obtained from nature by plants or animals. Some examples of natural fibers are cotton, wool, jute and silk. While synthetic fibres are man made. Some examples of synthetic fibres are polyester, nylon.

What Are Natural and Synthetic Fibres?

Answer:

Natural fiber - Natural fiber are the fibres that are obtained from nature by plants or animals. Some examples of natural fibers are - cotton, wool, jute, silk etc. Synthetic fiber - Synthetic fiber are the fibres that are made by human beings. Hence, the fibres that are man made are called synthetic fibres. Some examples of synthetic fibres are - polyester.

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