

# Class 8 Science Chapter 3 Important Questions

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## Class 8 Science Chapter 3 Important Questions Set – 1

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**Define the term synthetic fibre. Mention also their pattern of joining with each other.**

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Synthetic fibre: There are some fibres which made from chemical substances, and they do not obtain from plant or animal sources. These are called synthetic fibres. Some examples of synthetic fibres are polyester, nylon and acrylic.

A synthetic fibre is also a chain of small units joined together. Each small unit is actually a chemical substance. Many such small units combine to form a large single unit called a polymer. The word 'polymer' comes from two Greek words; "poly" meaning "many" and "mer" meaning "part/unit". So, a polymer is made of many repeating units.

**Can you write a name of a "Natural polymer"?**

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Cotton is a natural polymer, called cellulose. Cellulose is made up of a large number of glucose units.

**Name some common articles made from fibres.**

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Generally, shirt, trousers, bed sheets, blankets, curtains, table-cloths, towels and dusters are made from different kinds of fibres.

**Why rayon is referred as "artificial silk" or "man-made fibre"? Discuss.**

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Towards the end of the nineteenth century, scientists were successful in obtaining a fibre having properties similar to that of silk. Such fibre was obtained by chemical treatment of wood pulp. This fibre was called rayon or artificial silk.

Although rayon is obtained from a natural source, wood pulp, yet it is a man-made fibre. Therefore, this fibre is referred as artificial silk or man-made fibre.

**Nylon Fibre**

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Nylon is another man-made fibre. We use many articles made from nylon, such as socks, ropes, tents, toothbrushes, car seat belts, sleeping bags, curtains etc.

Nylon is also used for making parachutes and ropes for rock climbing.

### **Class 8 Science Chapter 3 Important Questions Set – 2**

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**“In every year, Boojho likes to wear a sweater which appear to resemble like wool”. Which type of fibre is used in his sweater? Why do people choose this type of sweaters?**

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These are prepared from a type of synthetic fibre, called acrylic. The wool obtained from natural sources is quite expensive, whereas clothes made from acrylic are relatively cheap. They are available in a variety of colours. Synthetic fibres are more durable and affordable which makes them more popular than natural fibres.

**“We should not wear synthetic clothes while working in kitchen or in the laboratory”. Why?**

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Synthetic fibres melt on heating. This is actually a disadvantage of synthetic fibres. If the clothes catch fire, it can be disastrous. The fabric melts and sticks to the body of the person wearing it. We should, therefore, not wear synthetic clothes while working in in the kitchen or in a laboratory.

**Write down some characteristics of synthetic fibre.**

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Synthetic fibres possess unique characteristics which make them popular dress materials.

- i) Synthetic fibres are very strong and durable.
- ii) Synthetic fibres are light, wrinkled free and easy to maintain.
- iii) Synthetic fibres are less expensive and readily available in the market.
- iv) Synthetic fibres are extremely fine and shiny.
- v) Synthetic fibres absorb very little water.
- vi) Synthetic fibre are not attacked by moths easily.

**What do you mean by “thermoplastic” and “thermosetting plastic”?**

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There are some plastic articles which can bend easily while some break when forced to bend. When we add hot water to a plastic bottle, it gets deformed. Such plastic which gets deformed easily on heating and can be bent easily are known as thermoplastics. Polythene and PVC are some of the examples of thermoplastics. These are used for

manufacturing toys, combs and various types of containers.

On the other hand, there are some plastics which when moulded once, cannot be softened by heating. These are called thermosetting plastics.

### **The Characteristics of Polyester Fibre**

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Polyester is another synthetic fibre. Although, polyester (Poly+ester) is actually made up of the repeating units of a chemical called an ester. Esters are the chemicals which give fruits their smell.

Fabric made from this fibre does not get wrinkled easily. It remains crisp and is easy to wash. So, it is quite suitable for making dress material. Generally, people love to wearing polyester shirts and other dresses. Terylene is a popular polyester. It can be drawn into very fine fibres that can be woven like any other yarn.

### **Class 8 Science Chapter 3 Important Questions Set – 3**

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**Bakelite and Melamine are the example of thermosetting plastic. Write down their some features.**

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Bakelite is a poor conductor of heat and electricity. It is used for making electrical switches, handles of various utensils, etc. Melamine is a versatile material. It resists fire and can tolerate heat better than other plastics. It is used for making floor tiles, kitchenware and fabrics which resist fire.

**Why do people always prefer to choose plastic instead of using metals? Explain.**

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Today if we think of storing a food item, water, milk, pickles, dry food, etc., plastic containers seem most convenient. This is because of their light weight, lower price, good strength and easy handling. Being lighter as compared to metals, plastics are used in cars, aircrafts and spacecrafts, too. Metals like iron get rusted when left exposed to moisture and air. But plastics do not react with water and air. They are not corroded easily. Plastics are poor conductors of heat and electricity. That is why electrical wires have plastic covering, and handles of screw drivers are made of plastic. The list is endless if we start counting articles like slippers, furniture and decoration pieces, etc. Therefore, people always prefer to choose plastic instead of using metals.

**Which type of plastic is used for non-stick coating on cook-wares?**

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Teflon is a special plastic on which oil and water do not stick. It is used for non-stick coating on cook-wares.

## **“Paheli wants to know the uses of plastic in health-care industry”. Will you help her?**

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Plastics find extensive use in the health-care industry. Some examples of their use are the packaging of tablets, many bottles, threads used for stitching wounds, syringes, doctors' gloves and a number of medical instruments and so on.

### **Biodegradable and Non-Biodegradable**

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A material which is not easily decomposed by natural processes is termed as non-biodegradable.

Such as plastic. A material which gets decomposed through natural processes, such as action by bacteria, is called biodegradable. Such as animals, trees, cotton, jute. All organic compound comes to this category.

### **Class 8 Science Chapter 3 Important Questions Set – 4**

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#### **Boojho wants to know that which type of plastic is used for the coating of uniforms of fireman? Would you like to help him?**

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Although synthetic fibre catches fire easily, it is interesting to know that the uniforms of firemen have coating of “melamine plastic” to make them flame resistant.

#### **“Avoid the use of plastic as for as possible”. Justify the statement.**

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Plastic takes several years to decompose; it is not environment friendly. A material which is not easily decomposed by natural processes is termed as non-biodegradable. Such as plastic. A material which gets decomposed through natural processes, such as action by bacteria, is called biodegradable. Such as animals, trees, cotton, jute. All organic compound comes to this category. Plastic causes environmental pollution. Besides, the burning process in the synthetic material is quite slow and it does not get completely burnt easily. In the process it releases lots of poisonous fumes into the atmosphere causing air pollution. We should use of bags made of cotton or jute instead of plastic bags when we go for shopping. It is better to recycle the plastic waste. Most of the thermoplastics can be recycled. Try to minimise the use of plastic materials. We should develop habits which are environment friendly.

#### **“Generally, we see in a garbage dump where animals eating garbage”. How does plastic create problems for them?**

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In the process of eating the food waste from dump of garbage – “they swallow materials like polythene bags and wrappers of food”. The plastic material chokes the respiratory system of these animals, or forms a lining in their stomachs and can be the cause of their death.

### **How would you contribute towards the reducing the use of plastic materials?**

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Sometimes people are very careless and throw the wrappers of chips, biscuits and other eatables on the road or in parks or picnic places. The polybags carelessly thrown here and there are responsible for clogging the drains, too. Should we not think twice before doing so?

There are some of the steps which contribute towards the reducing the use of plastic materials by us.

- i) Avoid the use of plastics as far as possible.
- ii) Buy products without a little plastic packaging.
- iii) Use bags made of cotton or jute or recycled paper, when you go for shopping.
- iv) Collect and dispose of biodegradable and nonbiodegradable waste separately.
- v) Do not throw plastic waste in the street on the pavement or in drains.
- vi) Try to minimise the use of plastic materials e.g. use a steel lunch box instead of a plastic one.

### **Do Not Burn Plastic and Synthetic Fabrics**

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Burning of plastics and synthetic fabrics produces lots of poisonous gases causing air pollution.

So, it is not advisable to burn plastic and synthetic fabrics.

### **Class 8 Science Chapter 3 Important Questions Set – 5**

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**“As a responsible citizen remember the 4R principle”. Explain the statement.**

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The 4 R principle is: 4R means Reduce, Reuse, Recycle and Recover.

- 1) Reduce: We must reduce the use of resources as possible and save them for the future generation. Reducing the usage is a method of conservation of resources.
- 2) Reuse: Resources can be reused wherever possible. We need not produce resources on large scale which may lead to exploitation of natural resources. Instead we can reuse them.
- 3) Recycle: Resources can be recycled wherever possible so that they can be used again

and again.

4) Recover: We can recover or restore the resources into their original state, wherever possible.

**“A lady went to a market to buy a blanket. The shopkeeper showed her blankets made up of acrylic fibres as well as made up of wool. She preferred to buy an acrylic blanket”. Can you guess why?**

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Acrylic blankets are cheap, light in weight, more durable and are available in variety of colours and designs. They can be easily washed at home.

**Give example to show that plastics are non-corrosive in nature.**

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We can store various kinds of chemicals and other materials in plastic containers because they are non-reactive and does not react with water and air.

- 1) Teflon, a kind of plastic is used as a coating to manufacture non-stick cookware.
- 2) Bakelite is a poor conductor of heat and electricity so, it is used for making electric switches and handles of the utensils.
- 3) Melamine is used for making floor tiles and kitchenware.

**“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?**

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It is advised to restrict the use of plastic because of the following reasons:

- 1) The articles made of plastics are non-biodegradable. They do not decompose (or rot) easily. This causes a great problem in the disposal of plastic waste.
- 2) The burning of plastic waste gives out harmful gases which pollute the air. So, it is not advisable to dispose of the used plastic articles by burning.

**Manufacturing Synthetic Fibres is Actually Helping Conservation of Forests**

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Synthetic fibres are man-made fibres. These fibres are made from petrochemicals. For manufacturing synthetic fibres cutting of trees or killing of animals is not required and we can conserve our natural environment using synthetic fibres. Hence, “manufacturing synthetic fibres is actually helping conservation of forests”.