

- (Q.) What are natural fibres?** (1 Mark)
(Ans) Fibers which are obtained from either plants or animals are called natural fibers.
- (Q.) What are synthetic fibres?** (1 Mark)
(Ans) The fibers which are made by human beings are called synthetic fibres.
- (Q.) Name two natural fibres obtained from plants.** (1 Mark)
(Ans) Cotton and jute are natural fibers obtained from plants.
- (Q.) Name two natural fibres obtained from animals.** (1 Mark)
(Ans) Wool and silk are natural fibers obtained from animals.
- (Q.) What is a polymer?** (1 Mark)
(Ans) Many small units combine to form single large unit called as polymer. They are building blocks of many synthetic fibers.
- (Q.) Name a synthetic fibre which resembles silk.** (1 Mark)
(Ans) Rayon is a synthetic fibre which resembles silk.
- (Q.) How is rayon prepared?** (1 Mark)
(Ans) Rayon is prepared by chemical treatment of wood pulp.
- (Q.) Name the raw material used in synthesis of nylon.** (1 Mark)
(Ans) Nylon is prepared from coal, water and air.
- (Q.) Name the repeating units of polyester.** (1 Mark)
(Ans) The repeating units of polyester are esters.
- (Q.) Name two common forms of polyester.** (1 Mark)
(Ans) Two common forms of polyester are terylene and PET.
- (Q.) Name the raw materials used for making synthetic fibers.** (1 Mark)
(Ans) The raw materials used for making synthetic fibers are of petroleum origin and are called petrochemicals.
- (Q.) What are thermosetting plastics?** (1 Mark)
(Ans) A plastic which once molded cannot be softened and molded into other shape on heating is called thermosetting plastics.
- (Q.) Give two examples of thermoplastics.** (1 Mark)
(Ans) PVC (Poly Vinyl Chloride) and Polythene are examples of thermoplastics.

- (Q.) Why bakelite is used in making electrical switches?** (1 Mark)
- (Ans) Bakelite is used in making electrical switches because it is a poor conductor of electricity.
- (Q.) Name the chemicals which give fruits their characteristic smell.** (1 Mark)
- (Ans) Esters are the chemicals which give characteristic smell to fruits.
- (Q.) Name the man made fiber made of wood pulp.** (1 Mark)
- (Ans) Rayon is man made fiber, made of wood pulp.
- (Q.) Name the fabric, which resembles wool.** (1 Mark)
- (Ans) Acrylic is a fibre which closely resembles wool.
- (Q.) Why nylon is used for making carpet, toothbrush bristles and tyre?** (1 Mark)
- (Ans) Nylon is strong, elastic and light. Hence, it is used for making carpet, toothbrush bristles and tyres.
- (Q.) How are clothes, fabrics and fibres are related to each other?** (1 Mark)
- (Ans) The clothes are made of fabrics. Fabrics are made from fibres which are obtained from either natural or artificial sources.
- (Q.) Name the synthetic fibre which is a cheap substitute of silk.** (1 Mark)
- (Ans) Rayon is the cheap substitute of silk.
- (Q.) Why nylon is used in making clothes?** (1 Mark)
- (Ans) Nylon fibre is strong, elastic and light. It is lustrous and easy to wash. Therefore, it is used for making clothes.
- (Q.) Although rayon is obtained from a natural source, wood pulp, yet it is a man-made fibre. Give reasons.** (2 Marks)
- (Ans) Rayon is a manufactured regenerated cellulose fiber. The wood pulp is treated with chemicals and transformed in different form. Then rayon fibre is made out of it. Therefore, rayon is man-made fiber.
- (Q.) Nylon is used in making many articles. Name four of them.** (2 Marks)
- (Ans) Nylon is used in many articles, such as socks, ropes, tents, toothbrushes, car seat belts, sleeping bags, curtains and parachute ropes.
- (Q.) Why polyesters are preferred over natural fibres for making dress material?** (2 Marks)
- (Ans) The fabric made from this fibre does not get wrinkled easily. It remains crisp and is easy to wash. Therefore, it is quite suitable for making dress material.
- (Q.) What is PET? What are its uses?** (2 Marks)
- (Ans) PET is a familiar form of polyester.
- Uses: It is used for making bottles, utensils, films, wires and many other useful products. PET bottles and PET jars for storing rice, sugar and other eatable things.

(Q.) What are acrylics? What are its uses?

(2 Marks)

(Ans) Acrylics are type of synthetic fibre which resemble wool. They are available in a variety of colours and are used for making sweaters, shawls and blankets. The clothes made from acrylics are relatively cheap.

(Q.) Why one should not wear polyester clothes while working in the kitchen or laboratory?

(2 Marks)

(Ans) Polyester is synthetic fiber .These fabric melts and sticks to the body of the person wearing it when they catch fire. Therefore, we should, therefore, not wear synthetic clothes while working in the kitchen or in a laboratory.

(Q.) Why synthetic fibers are preferred as clothing material?

(2 Marks)

(Ans) Synthetic fibres possess unique characteristics. They dry up quickly, are durable, less expensive, readily available and easy to maintain. So, they are preferred as clothing material.

(Q.) Why plastic containers are preferred over containers made of glass and clay for storing foodstuffs?

(2 Marks)

(Ans) Foods are conveniently stored in plastic containers because of their light weight, lower price, good strength and easy handling.

(Q.) Acrylic is considered as a cheap substitute of wool. Give reasons.

(2 Marks)

(Ans) Acrylic is warm, soft, lightweight fiber having wool like appearance. It is easy to wash and dries up quickly. It retains the shape. It can be dyed easily to different colours. Therefore, acrylic is considered cheap substitute of wool.

(Q.) Define (i) Fabric (ii)Cloth

(2 Marks)

(Ans) (i) Fabric is any material made by weaving, knitting, crocheting, or bonding. It is thermal insulation and prevents excessive heat-loss from the body.

(ii)Cloth is a finished piece of fabric that can be used for various purposes like wearing over body or covering a bed.

(Q.) Write the properties and uses of rayon.

(3 Marks)

(Ans) (i) Rayon is cheaper than silk and can be woven like silk fibres.

(ii) It can be dyed in a wide variety of colours.

(iii) Rayon is mixed with cotton to make bed sheets or mixed with wool to make carpets.

(Q.) Write three characteristics of synthetic fibers.

(3 Marks)

(Ans) Synthetic fibers are

(i) usually stronger than natural fibers.

(ii) lighter than natural fibers.

(iii) cheaper than natural fibers.

(Q.) Write three disadvantages of synthetic fibers. (3 Marks)

(Ans) (i) Synthetic fibers are non –biodegradable.
(ii) synthetic fibers do not absorb sweat (water). So they are not suitable on humid day.
(iii) The main source of synthetic fibers is petroleum. With increase in use of synthetic fibers this natural resource is depleting quickly.

**(Q.) (a) Name a fibre that can be used as a cheap substitute of silk.
(b) Write four properties of nylon that makes it a popular fibre for making clothes?
(c) What is terylene?** (3 Marks)

(Ans) (a) Rayon
(b) Nylon is strong, elastic, light and easy to wash. Therefore, it is used for making clothes.
(c) Terylene is a synthetic fibre. It is a popular polyester.

(Q.) What are the advantages of using synthetic fiber? (5 Marks)

(Ans) Properties of synthetic fibers :
i) cheap and affordable.
ii) wrinkle free .Hence, they do not need ironing. They do not need maintenance like natural fibers.
iii) dry quickly.
iv) more elastic as compared to natural fibers.
v) more durable as compared to natural fibers.
vi) do not shrink.

(Q.) State True or False
(i) Nylon is a polymer.
(ii) All polymers are natural materials.
(iii) Polythene is thermosetting plastic.
(iv) Starch, cellulose, proteins, silk and rubber are natural polymers.
(v) Polyethylene terephthalate (PET) is used in making clothes. (5 Marks)

(Ans) i) True ii) False iii) False iv) True v) False

(Q.) Why the government is trying to ban plastic bags and promote paper bags though they are stronger than the paper bags? (5 Marks)

(Ans) Plastic bags are non-biodegradable i.e. it does not decompose by micro-organisms easily. So it keeps accumulating in earth and in water, thereby causing soil and water pollution.
Moreover on heating, plastic releases harmful gases, so it cannot be destroyed by heating.
Therefore, the government is trying to ban them. On the other hand, paper is biodegradable and hence, eco-friendly.

(Q.) i) The process of formation of polymers is called -----.
ii) Cotton is a natural polymer made of-----.
iii) Another name of -----is artificial silk.
iv) ----- has feel of wool.
v) Bakelite is an example of-----. (5 Marks)

(Ans) i) polymerization.
ii) cellulose.
iii) rayon.
iv) acrylic.
v) thermosetting plastic.

(Q.) Match the column A and B

COLUMN A

- (i) Teflon
- (ii) Terelene
- (iii) Cellulose
- (iv) Rayon
- (v) Synthetic fiber

COLUMN B

- (a) Natural polymer
- (b) Artificial silk
- (c) Acrylic
- (d) Non stick coating
- (e) popular polyester

(5 Marks)

- (Ans) i) (d)
ii) (e)
iii) (a)
iv) (b)
v) (c)

(Q.) State True or False

- (i) Plastic is also a polymer like the synthetic fibre
- (ii) Synthetic fabrics soak less water (sweat)
- (iii) Rayon is modified glucose.
- (iv) Polywool is mixture of polyester and wool.
- (v) All plastics are biodegradable.

(5 Marks)

- (Ans) (i) True (ii) True (iii) False (iv) True (v) False

(Q.) What are the problems related to the use of plastics.

(5 Marks)

- (Ans) i) Most of the plastics are non-biodegradable. As a result, garbage is increasing at a very fast rate and it is a threat to the environment.
- (ii) The plastic/polythene bags thrown in garbage are consumed by cows along with the garbage thrown in dumps. The plastic gradually accumulates inside the cow's intestine and blocks them and the cows die.
- (iii) Plastics are also carcinogenic.
- (iv) Plastic is made from the conventional source of energy, petroleum, which is a fast-depleting resource.
- (v) On burning, plastic produces poisonous gases.