



CLASS NOTES-ANSWERS

1. Explain why some fibres are called synthetic.

Answer: Some fibres are called synthetic fibres because they are man-made fibres prepared using chemicals. These are made of small units that join together to form long chains. Some examples of synthetic fibres are nylon, rayon, acrylic, polyester etc.

2. Mark the correct answer.

Rayon is different from synthetic fibres because

(a) it has a silk-like appearance.

(b) it is obtained from wood pulp.

(c) its fibres can also be woven like those of natural fibres.

Answer: (b) it is obtained from wood pulp.

3. Fill in the blanks with appropriate words.

(a) Synthetic fibres are also called _____ or _____ fibres.

Answer: artificial or man-made fibres.

(b) Synthetic fibres are synthesised from the raw material called _____.

Answer: petrochemicals.

(c) Like synthetic fibres, plastic is also a _____

Answer: polymer.

4. Give examples which indicate that nylon fibres are very strong.

Answer: Following are the examples that indicate nylon fibres are very strong:



- Nylons are used for making parachutes and ropes for rock climbing.
- Nylon is used in making seat-belts, fishing nets and tyre cords.
- Nylon is used in making sports accessories like rackets.

5. Explain why plastic containers are favoured for storing food.

Answer: Plastic containers are favoured for storing food because plastic is non-reactive and will not react with the ingredients of the food items. They are lightweight and strong too.

6. Explain the difference between thermoplastic and thermosetting plastics.

Answer: The difference between thermosetting plastics and thermoplastics are as follows:

Thermosetting plastics	Thermoplastics
It cannot be bent; it will break if we attempt to bend thermosetting plastics	Thermoplastic can be bent easily
On heating thermosetting plastics, they cannot be softened. This is the reason it cannot be reshaped once it is moulded.	On heating the thermoplastics, it becomes softened and can be moulded and reshaped easily.
They lose their plasticity.	They do not lose their plasticity.
Examples: Bakelite, melamine	Examples: polyethene, PVC

7. Explain why the following are made of thermosetting plastics.

(a) Saucepan handles

Answer: Thermosetting plastics are used to make saucepan handles



because they are bad conductors of heat and do not get heated up while cooking and on heating, these plastics do not get softened.

(b) Electric plugs/switches/plug boards

Answer: Bakelite is a kind of thermosetting plastic which is a bad conductor of heat and electricity. Because of this property, it is used for electric plugs, switches, plug boards, etc.

8. Categorise the materials of the following products into 'can be recycled' and 'cannot be recycled'.

Telephone instruments, plastic toys, cooker handles, carry bags, ballpoint pens, plastic bowls, plastic covering on electrical wires, plastic chairs, electrical switches.

Answer:

Can be recycled	Cannot be recycled
plastic toys	Telephone instruments
carry bags	cooker handles
plastic bowls	electrical switches
plastic covering on electrical wires	
plastic chairs	
ballpoint pens	

9. Rana wants to buy shirts for summer. Should he buy cotton shirts or shirts made from synthetic material? Advise Rana, giving your reason.

Answer: Rana should buy a cotton shirt for the summer and not a synthetic shirt. This is because, cotton is a good absorber of water and has more capacity to hold moisture than synthetic fibres. In summers,



we have extensive sweating and cotton clothes can soak the sweat coming out of the body and expose it to the environment. Thus, it helps in evaporating sweat and helps in cooling the body.

10. Give examples to show that plastics are non-corrosive in nature.

Answer: Plastics are non-corrosive in nature; they do not get damaged by chemical actions. For example, the chemicals used for cleaning are usually, stored in plastic bottles instead of metal containers as plastic containers do not react with items stored in it. The plastic materials do not get rusted when exposed to moisture and air and do not get decomposed when left in open for a long period.

11. Should the handle and bristles of a toothbrush be made of the same material? Explain your answer

Answer: The handle and bristle of a toothbrush should not be made of the same material, as the handle of the toothbrush should be hard and strong, so that, it can give a firm grip while the bristle should be soft and flexible, so that, it does not harm the soft gums.

12. 'Avoid plastics as far as possible'. Comment on this advice.

Answer: We should avoid plastics as far as possible because plastics are non-biodegradable in nature. Once introduced into the environment, they cause pollution. If burnt, they release poisonous gases causing air pollution and affect the soil fertility when thrown into the soil. Plastic bags thrown in the garbage dump and waterbodies are swallowed by animals, choking their respiratory system and causing fatalities in them. The waste plastic articles thrown here and there



Carelessly, may get into sewers and block them.

13. Match the terms of column A correctly with the phrases given in column B

A	B
(i) Polyester	(a) Prepared by using wood pulp
(ii) Teflon	(b) Used for making parachutes and stockings
(iii) Rayon	(c) Used to make non-stick cookware
(iv) Nylon	(d) Fabrics do not wrinkle easily

Answer:

A	B
(i) Polyester	(d) Fabrics do not wrinkle easily
(ii) Teflon	(c) Used to make non-stick cookware
(iii) Rayon	(a) Prepared by using wood pulp
(iv) Nylon	(b) Used for making parachutes and stockings

14. 'Manufacturing of synthetic fibres is actually helping conservation of forests'. Comment.

Answer: The manufacturing of synthetic fibres are helpful in the conservation of forests. Because, if we use natural fibres, the raw materials for them have to be derived from plants, which requires cutting off lots of trees. So, the manufacturing of synthetic fibres

proves to be helpful in the conservation of forests.

15. Describe an activity to show that thermoplastic is a poor conductor of electricity.

Answer: In order to show that thermoplastic is a poor conductor of electricity, we will design a circuit. For that, we need a bulb, some wires, a battery, a piece of metal and a plastic pipe (as shown in the figure below). After setting the experiment, switch on the current, and you will observe that the bulb glows in the former case. In the latter case, the bulb does not glow. Hence, a plastic pipe (which is a thermoplastic) is shown to be a poor conductor of electricity.

