

Synthetic Fibres and Plastics

Check Your Concepts

Q.1. Match the following:

Directions: Given below are two columns - column I and column II. Match the two columns and write the correct answer in the given blank grid.

1. Match the following:

Column – I (Plastics)		Column – II (Uses of Plastics)	
(A)	Polystyrene	(i)	Handles of utensils
(B)	Bakelite	(ii)	Non-sticking pans
(C)	Melamine	(iii)	Making disposable cups
(D)	Teflon	(iv)	Making floor tiles/ kitchenware and fabrics

Q.2. Fill in the blanks:

Directions: Complete the following statements with an appropriate word / term to be filled in the blank space(s).

- The first thermosetting plastic was called _____.
- The non-stick material used in non-stick pans and other cookware is _____.
- The first artificial fibre synthesized was named _____.
- The thread or filament that is used to make cloth is called _____.
- _____ are the type of plastics that get deformed easily on heating and can be bent easily.
- Polyester films known as _____ are used for making magnetic recording tapes in audio- cassettes etc.
- Based on the thermal behaviour, plastics can be divided into _____ and _____.
- Basic constituent of cotton is _____.
- Basic constituent of wool and silk is _____.
- _____ is a natural fibre which can stretch up to 1 km.

Q.3. True / False:

Directions: Read the following statements and mark your response as true or false. Rewrite the correct statement(s) in the box provided below, in case of false statement(s).

1. Rayons are semi-synthetic fibres. []
2. Polysters are purely synthetic fibres. []
3. Rayons are derived from cellulose, []
4. Acrylic fibres are crimped and are a substitute for natural wool. []
5. Synthetic fibres are generally hydrophilic. []
6. We can mould plastics into various shapes because of the property of elasticity in them. []
7. Thermosetting plastics, once set after being moulded, can be easily moulded again. []
8. Rayon is called a regenerated fibre.
9. Thermoplastics can't be processed repeatedly by melting and subsequent solidification without undergoing any chemical change. []
10. Most chemicals used for preparing the monomers which form plastics can cause cancer among the workers. []

Q.4. Multiple choice questions:

Directions: Read the following questions and choose the answers that best answer the questions.

1. Select the one that is a natural fibre.
(a) Cellulose (b) Nylon (c) Dacron (d) Terylene
2. Which of the following is true for rayon?
(a) Rayon cannot be obtained by chemical treatment of wood pulp.
(b) Rayon is also called artificial silk.
(c) Both the above are correct.
(d) None of the above is correct.
3. Which of the following is true for acrylic?
(a) It is a synthetic fibre that resembles wool.
(b) It can be easily knitted to make sweaters, socks and shawls.
(c) Both the above are correct.
(d) None of the above is correct.

4. Which of the following is true for plastics?
- (a) Like synthetic fibres/ plastics are also polymers.
 - (b) Thermo-plastics are harder and stronger than thermosetting plastics.
 - (c) Bakelite is a thermoplastic.
 - (d) None of the above is correct.
5. Which of the following is true?
- (a) Fabrics made of polyesters and nylons are heat set.
 - (b) Plastics are synthetic materials that can't be moulded into permanent shape.
 - (c) Natural fibres are hydrophobic.
 - (d) Synthetic fibres cannot accumulate electric charge on them.
6. Raw materials for most of the fabrics are obtained from
- (a) Earth
 - (b) Sky
 - (c) Petroleum
 - (d) None of these
7. Select the material that is used to make ropes for use in rock climbing
- (a) Nylon-6
 - (b) Nylon-66
 - (c) Rayon
 - (d) Acrylic
8. Since plastics are not generally attacked by chemicals, so they are ideal substitutes for
- (a) Wood
 - (b) Metals
 - (c) Glass
 - (d) All of these
9. Acrylic fibres
- (a) Are a substitute for natural wool.
 - (b) Decompose with melting.
 - (c) Are not crimped.
 - (d) All the above are correct.

Q.5. Subjective questions:

1. Differentiate between natural fibres and synthetic fibres.

Ans.

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2. Why is rayon not considered a synthetic fibre completely?

Ans.
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3. Classify melamine as a thermo-plastic or thermosetting plastic. Mention its use.

Ans.
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4. Why is it advisable to wear cotton clothes in summer?

Ans.
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5. Why is Bakelite used for making electrical switches and handles of utensils?

Ans.
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6. What is yarn? Name two ways of combining thread to form cloth

Ans.
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7. Complete the following table.

	Polymer		Use Polymer
1.	Polythene	A.
2.	B.	Non-stick kitchen ware
3.	C.	Used to make thermo cole , foam
4.	Perspex	D.