

Class 12 Chemistry Chapter 15 Polymers MCQs

1. Any substance made up of multiple repeating units called polymers is referred to as a polymer.

- a) Mers
- b) Plastic
- c) Resins
- d) Blocks

Answer: a

Explanation: Any substance made up of multiple repeating units, known as mers, is referred to as a polymer. Polymers are made up of a large number of molecules connected together to form lengthy chains.

2. Which of the following polymers does not fall within the configuration category?

- a) Cross-linked
- b) Atactic
- c) Syndiotactic
- d) Isotactic

Answer: a

Explanation: The category of configuration does not include cross-linked polymers. The categories of configuration include syndiotactic, atactic, and isotactic. Within a macromolecule, tacticity refers to the relative stereochemistry of neighbouring chiral centres.

3. Which of the following is not a thermoplastic example?

- a) Polyvinyl chloride
- b) Epoxy

- c) Polyesters
- d) Nylon

Answer: b

Explanation: Epoxy is not a thermoplastic material. A thermoset polymer is an example of one. Thermoplastics include polyvinyl chloride, nylon, and polyesters.

4. Which of the following criteria does not apply to polymers?

- a) Source
- b) Structure
- c) Method of preparation
- d) Number of monomers

Answer: d

Explanation: Polymers are very massive molecules made up of a large number of simple units, or monomers, joined together. They are classed primarily based on their source, structure, synthesis mode, and molecular forces.

5. Which of the following does not belong in the category of natural polymers?

- a) Cellulose
- b) Starch
- c) Rayon
- d) RNA

Answer: c

Explanation: Natural polymers are made up of polymers derived from plants and animals. Rayon is a semi-synthetic polymer that is created by chemically altering a natural polymer. Cellulose acetate polymer or rayon is produced by acetylation of cellulose with acetic anhydride in sulphuric acid.

6. The synthesis of which of the following polymers necessitates the loss of tiny molecules on a regular basis?

- a) Polythene
- b) Nylon-6,6
- c) Buna-N
- d) Buna-S

Answer: b

Explanation: Condensation polymers are created through a series of condensation reactions between two bi-functional or tr-functional monomeric units, as well as the loss of minor molecules such as water, alcohol, and HCl. The condensation of hexamethylenediamine and adipic acid produces nylon-6,6, which is devoid of water molecules.

7. The crystallinity rises as the crystallinity rises. The polymer's brittleness.

- a) Increases
- b) Remains constant
- c) Moderate
- d) Decreases

Answer: d

Explanation: The brittleness of the polymer increases as the crystallinity of the polymer increases. The polymers' strength and chemical resistance improves as well.

8. The polymer absorbs _____ and expands.

- a) Water
- b) Ether
- c) Ethyl alcohol
- d) Methanol

Answer: a

Explanation: The polymer soaks up the water and expands. Slowly, polymer dissolves into the viscous, heterogeneous polymer solution.

9. Short-chained, low-molecular-weight polymers are known as liquid or gas polymers.

- a) High-polymers
- b) Oligo-polymers
- c) Copolymers
- d) Homopolymers

Answer: b

Explanation: Oligo-polymers are liquid or gaseous polymers with very short chains. Their molecular weight is in the range of 100 g/mol. The molecular weights of high-polymers range from 10000 to 1000000 g/mol.

10. Which of the following stages of addition polymerization is not one of them?

- a) Initiation
- b) Recrystallisation
- c) Termination
- d) Propagation

Answer: b

Explanation: Similar monomers are joined to produce long chain molecules in the addition polymerization process. Initiation, propagation, and termination are all part of the process. A chain reaction polymerization is another name for this technique.