

CBSE Class 12 physics
Important Questions
Chapter 15
Polymers

1 Mark Questions

1. Name the two types of polymerisation.

Ans. The two types of polymerisation are

- (a) Addition polymerisation and
- (b) Condensation polymerisation.

2. Name some initiators.

Ans. Examples of initiator are –

Benzoyl peroxide, acetyl peroxide, tert – butyl peroxide etc.

3. Name the two types of polyethene.

Ans. Polyethene is of two types –

- 1) Low Density Polyethene
- 2) High Density Polyethene

4. Write the monomer of Teflon.

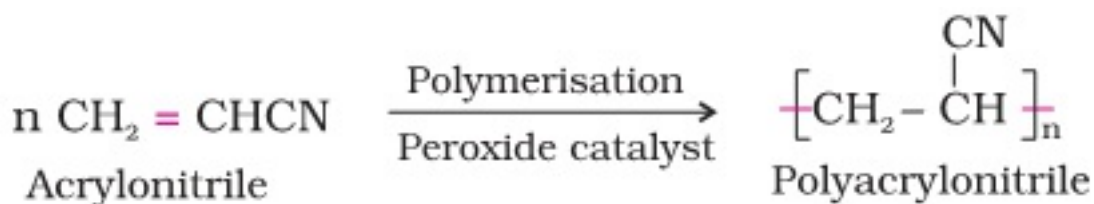
Ans. Teflon

Monomer = Tetrafluoroethene



5. Give preparation of polyacrylonitrile.

Ans. Polyacrylonitrile



6. Write one use of each – Teflon and polyacrylonitrile.

Ans. Uses:

- (1) Teflon is used in making oil seals & for non – stick surface coated utensils.
- (2) Polyacrylonitrile is used for wool in making commercial fibres an orlon or acrilan.

7. Classify the following substances as natural, semi – synthetic and synthetic polymer

Ans. Natural polymers: Cellulose, Starch, And Protein

Semisynthetic: Rayon

Synthetic: Plastic, Nylon

8. Give two examples of each (i) linear polymer (ii) Network polymer.

Ans. Linear polymers: Polythene, Polyvinylchloride

Network polymers: Bakelite, Melamine

9. Why is condensation polymerisation also called on step – growth polymerisation?

Ans. Condensation polymerisation produces a distinct functionalized species and is independent of each other. Therefore it is also called step growth polymerisation.

10. Write some examples of condensation polymers.

Ans. Examples of condensation polymers are Nylon-6, 6, Dacron, Nylon 6 etc

11. How is Nylon – 6, 6 different from Nylon -6?

Ans. Nylon – 6, 6 is made of two bifunctional monomers, each having 6 carbon atoms

whereas Nylon – 6 is made from heating only one monomer having 6 carbon atoms.

12. Give the formula of monomer of Nylon – 6.

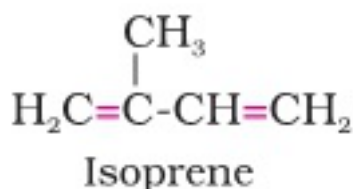
Ans. Monomer of Nylon -6 is caprolactum

13. What is copolymerisation?

Ans. The reaction in which a mixture of more than one monomeric species is allowed to polymerise & form a copolymer is called copolymerisation e.g. Buna -S.

14. What is the monomer of natural rubber?

Ans. Monomer of natural rubber is isoprene or 2 – methyl – 1, 3 – butadiene.



15. Give two examples of synthetic rubber.

Ans. Example of synthetic rubber – Neoprene, Buna – N etc.

16. Give one example of biodegradable polymer.

Ans. Biodegradable polymer: PHVB, Nylon – 2 – Nylon -6.

17. Classify following on Homopolymer and copolymer- PVC, Polystyrene, Buna – S, Neoprene, Buna – N, Teflon.

Ans. Homopolymer Copolymer

PVC Buna – S

Polystyrene Buna – N

Neoprene

Teflon

18. Classify following an addition and condensation polymer- Bakelite, Polythene, Nylon – 6, 6, Polyacrylonitrile

Ans. Addition polymer condensation polymers

Polythene Dacron

Polyacrylonitrile Nylon – 6, 6, Bakelite

19. Classify the following as addition and condensation polymers: Terylene, Bakelite, Polyvinyl chloride, Polythene.

Ans. Addition polymers:

Polyvinyl chloride, polythene

Condensation polymers:

Terylene, bakelite

20. Classify the following as addition and condensation polymers: Terylene, Bakelite, Polyvinyl chloride, Polythene.

Ans. Addition polymers:

Polyvinyl chloride, polythene

Condensation polymers:

Terylene, bakelite

21. Explain the difference between Buna-N and Buna-S.

Ans. Buna - N is a copolymer of 1, 3-butadiene and acrylonitrile.

Buna - S is a copolymer of 1, 3-butadiene and styrene.

22. Is $-(\text{NH}-\text{CHR}-\text{CO})_n-$, a homopolymer or copolymer?

Ans. $-(\text{NH}-\text{CHR}-\text{CO})_n-$ is a homopolymer because it is obtained from a single monomer unit, $\text{NH}_2-\text{CHR}-\text{COOH}$.