

## Chapter 15

## Polymers

Very Short Answer Type Questions

01. How are polymers classified based on the structure?
02. Explain the difference between Buna-N and Buna-S.
03. What are natural and synthetic polymers? Give two examples of each type.
04. Distinguish between the terms homopolymer and copolymer and give an example of each.
05. How do you explain in terms of the functionality of a monomer?
06. Define the term polymerization.
07. Is  $[\text{NH}-\text{CHR}-\text{CO}]_n$  a homopolymer or a copolymer?
08. How can you differentiate between addition and condensation polymerization?
09. Define thermoplastics and thermosetting polymers with two examples of each.
10. Write the monomers used for getting the following polymers.  
(i) Polyvinyl chloride                      (ii) Teflon                      (iii) Bakelite
11. Write the name and structure of one of the common initiators used in free radical addition polymerization.
12. How does the presence of a double bond in rubber molecules influence their structure and reactivity?
13. Discuss the main purpose of vulcanization.
14. What are the monomer's repeating units of Nylon-6 and Nylon-6,6?
15. What is a biodegradable polymer? Give an example of a biodegradable aliphatic polyester.
16. Classify the following as addition polymers and condensation polymers?  
Nylon 6, PVC, Neoprene and Bakelite
17. Give an example of a step-growth polymer.
18. Name a polymer used to make cups for hot drinks.
19. Write the name and structure of the monomer of polymer: PVC.
20. Give an example of elastomers.
21. What is the primary feature necessary for a molecule to make it useful in a condensation polymerization reaction?

22. What does the designation '6, 6' mean in the name nylon -6, 6?
23. How are Buna-S and Terylenesynthesized ? Give chemical equations.
24. Write the equations for the synthesis of (i) Neoprene and (ii) Glyptal. Which one of the two is a condensation polymer?
25. How is nylon-6, synthesized? Write the chemical equation for the reaction involved.
26. Explain the following processes with a suitable example in each case :
  - (i) Chain-growth polymerization
  - (ii) Step-growth polymerization.
27. What is the difference between Elastomers and fiber? Illustrate with an example of each.
28. Write equation to form (i) Nylon-6 (ii) Nylon-6,6.
29. How is Bakelite made and what is its major use? Why is Bakelite a thermosetting polymer?
30. Can a copolymer be formed in both addition and condensation polymerization? Explain with example.

