

**SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2024****(Regular/Improvement/Supplementary)****CHEMISTRY****GCHE6E02T: POLYMER CHEMISTRY****Time: 2 Hours****Maximum Marks: 60****SECTION A: Answer the following questions. Each carries *two* marks.****(Ceiling 20 Marks)**

1. What are inhibitors? Give an example.
2. Write a note on step-growth polymers. Give one example.
3. What is Kevlar? Mention any one use of it.
4. Give the basic idea of photodegradation of polymers.
5. Which type of monomers can be effectively polymerized using bulk polymerization technique?
6. Comment on suspension polymerization.
7. What is meant by compression moulding of plastics?
8. What is plastisol in rotational moulding?
9. Give an account Teflon. Mention any two applications of it.
10. Enlist the advantages of emulsion polymerization technique.
11. What are the advantages of Ziegler Natta polymerization?
12. What is glyptal? What are its monomers?

**SECTION B: Answer the following questions. Each carries *five* marks.****(Ceiling 30 Marks)**

13. Classify and explain the polymers based on (i) method of preparation and (ii) inter molecular forces with suitable examples.
14. Illustrate ring opening polymerization using suitable example.
15. What are the factors affecting the glass transition temperature of a polymer.
16. Write a note on inter facial condensation polymerization?
17. Compare the injection moulding and blow moulding techniques.
18. Explain cationic mechanism in chain polymerization reaction.
19. Write a note on (i) butyl rubber and (ii) neoprene.

**SECTION C: Answer any *one* question. Each carries *ten* marks.**

20. Write a note on Number average molecular weight, weight average molecular weight and viscosity average molecular weight.
21. Discuss how the plastic pollution adversely affects the human health. Explain the various methods employed in the recycling plastics.

**(1 x 10 = 10 Marks)**