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Name.....

Reg. No.....

**SIXTH SEMESTER U.G. DEGREE EXAMINATION, MARCH 2024**

(CBCSS—UG)

Polymer Chemistry


PCH 6B 01—POLYMER CHEMISTRY—I

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

**Section A (Short Answers)***Answer questions up to 20 marks.**Each question carries 2 marks.*

1. What is meant by tacticity of polymers ?
2. Distinguish between elastomers and plastics.
3. What is Zeigler Natta catalyst ? Give an example.
4. What are the advantages of suspension polymerisation ?
5. How is viscosity related to molecular weight of the polymer ?
6. What is meant by group transfer polymerisation ?
7. What is meant by glass transition temperature ?
8. What is meant by degree of polymerisation ?
9. What does recycle code  means ?
10. Explain the significance of molecular weight distribution in polymers.
11. What are conducting polymers ? Give an example.
12. Distinguish between HDPE and LDPE.

(Ceiling of marks : 20)

**Turn over**

**Section B (Paragraph)**

*Answer questions up to 30 marks.*

*Each question carries 5 marks.*

13. Compare bulk and solution polymerisation.
14. Discuss any two classification of polymers.
15. Distinguish condensation polymer from addition polymer.
16. Calculate the weight average of molecular weight for a polymer sample comprising of 9 moles of polymer molecules having molecular weight of 30.000 g/mol and 5 moles of polymer molecules having molecular weight of 50.000 g/mol.
17. Briefly discuss about free radical polymerisation with an example.
18. Differentiate between step growth polymerisation and chain polymerisation.
19. What is SBR ? How is it prepared ?

(Ceiling of marks : 30)

**Section C (Essay)**

*Answer any **one** question.*

*The question carries 10 marks.*

20. Describe the synthesis of four types of synthetic rubbers.
21. Briefly discuss about different types of polymer reactions.

(1 × 10 = 10 marks)