

C 80170

(Pages : 2)

Name.....

Reg. No.....

SIXTH SEMESTER B.A./B.Sc. DEGREE EXAMINATION, MARCH 2020

(CUCBCSS—UG)

Polymer Chemistry

PC 6B 01—POLYMER CHEMISTRY-I

Time : Three Hours

Maximum : 80 Marks

Section A

Answer all questions.

Each question carries 1 mark.

1. Give an example for a condensation polymer.
2. What are elastomers ?
3. What is tacticity ?
4. Define glass transition temperature.
5. Give two uses of teflon.
6. What is PAN ?
7. What is SBR ?
8. What is vulcanisation ?
9. Give two uses of PVC.
10. Give an example for a natural polymer.

(10 × 1 = 10 marks)

Section B

Answer any ten questions.

Each question carries 2 marks.

11. Give preparation and uses of polystyrene.
12. What is addition polymerization ? Give two examples.
13. Define weight average molecular mass.
14. What are conducting polymers ?
15. What is neoprene ? Write its uses.
16. Explain chain growth polymerization.

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17. What is calendaring ?
18. What is poly dispersity index ?
19. Write two uses of poly urethanes.
20. What is terylene ? Write its uses.
21. Give the synthesis of melmac.
22. Distinguish homo and hetero polymers.

(10 × 2 = 20 marks)

Section C

*Answer any five questions.
Each question carries 6 marks.*

23. Write short note on HDPE and LDPE.
24. Distinguish thermoplastics and thermosetting plastics.
25. Write short note on Urea formaldehyde resins and phenol formaldehyde resins.
26. Briefly discuss different polymer degradation processes.
27. Write short note on polymers in medical field.
28. Write short notes on rotational and injection moulding.
29. Write a note on high temperature and fire resistant polymers.
30. Write short notes on saran and dynel.

(5 × 6 = 30 marks)

Section D

*Answer any two questions.
Each question carries 10 marks.*

31. Explain the classification of polymers based on origin, synthesis and structure.
32. Briefly explain various polymerization techniques.
33. Explain the free radical, ionic and coordination polymerizations with mechanisms.
34. Write down the preparation, properties and uses of any three synthetic rubbers.

(2 × 10 = 20 marks)