

Reg. No. : .....

Name : .....

**Sixth Semester B.Sc. Degree Examination, March 2021**

**First Degree Programme Under CBCSS**

**Chemistry**

**Core Course – XI**

**CH 1642 : ORGANIC CHEMISTRY III**

**(2017 Admission)**

Time : 3 Hours

Max. Marks : 80

**SECTION – A**

Answer **all** questions. **Each** question carries **1** mark each.

- 1 What are epimers?
- 2 Give one method of preparation of furan.
- 3 Draw the structure of thiophene and pyrrolidine.
- 4 Name two drugs used for chemotherapy.
- 5 What is zwitter ion?
- 6 What is transcription?
- 7 What is vulcanisation?
- 8 Explain saponification value.

9. Explain degree of polymerisation.
10. Give two example for active methylene compounds.

**(10 × 1 = 10 Marks)**

### SECTION – B

**Each** question carries **2** marks. Answer **any eight** questions.

11. Explain mutarotation. Give example.
12. Write Haworth projection formula for Pyranose.
13. Explain the basicity of pyridine.
14. Give the structure and any two application of chloroquine.
15. Explain isoelectric point.
16. What do you mean by genetic code?
17. Explain iodine value.
18. What is isoprene rule?
19. What are condensation polymers?
20. Explain the term tacticity.
21. Explain tautomerism.
22. Give one method of preparation of Grignard's reagent.

**(8 × 2 = 16 Marks)**

### SECTION – C

**Each** question carries **4** marks. Answer **any six** questions.

23. Explain the structure of cellulose and what are there industrial applications?
24. Explain Skraup synthesis.
25. Explain solid phase peptide synthesis.

26. Explain the structure, function and deficiency disease of vitamin B1?
27. What are SBR and nitrile rubbers?
28. Explain Reformatsky reaction.
29. What are biodegradable polymers? Give example.
30. Explain the structure of DNA.
31. Explain the functional group transformation of  $=CO$ ,  $-COOR$ ,  $-CONH_2$  by using reducing agent  $LiAlH_4$ ?

**(6 × 4 = 24 Marks)**

### SECTION – D

Each question carries **15** marks. Answer any **two** questions.

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|-----|--|----|
| 32. | (a) Explain Fischer-indole synthesis.                              | 7  |
|     | (b) Give structural elucidation of quinolone.                      | 8  |
| 33. | (a) Explain the classification and structure of proteins.          | 10 |
|     | (b) What is protein denaturation and explain the colour reaction?  | 5  |
| 34. | (a) Explain the extraction and structural elucidation of nicotine. | 10 |
|     | (b) What are lipids?   | 5  |
| 35. | (a) Explain the different mechanism of addition polymerisation.    | 12 |
|     | (b) What are polymer additives?                                    | 3  |

**(2 × 15 = 30 Marks)**