

**THIRD SEMESTER (CBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2020**

Chemistry/Industrial Chemistry/Polymer Chemistry

CHE 3C 03—ORGANIC CHEMISTRY

Time : Two Hours

Maximum : 60 Marks

Section A (Short Answer)

Answer at least eight questions.

Each question carries 3 marks.

All questions can be attended.

Overall Ceiling 24.

1. What are carbanions ? What is its hybridization ?
2. Name two groups which show + I effect.
3. What are diastereoisomers ?
4. Why anthracene is aromatic ?
5. What is denatured spirit?
6. What is the chemistry of methanol poisoning ?
7. How will you convert acetic acid to methanol ?
8. How will you prepare ethyl amine from nitroethane ?
9. Draw the cyclic structure of glucose and fructose.
10. What are polypeptides? How are they prepared ?
11. State Isoprene rule.
12. Give the structure of coniine and nicotine.

Section B (Short Essay)

Answer at least five questions.

Each question carries 5 marks.

All questions can be attended.

Overall Ceiling 25.

13. What is hyper conjugation ? Explain with examples.
14. What is Steric effect ? How it influences the rate of chemical reactions ?
15. What is geometrical isomerism ? Explain the geometrical isomerism in maleic acid and fumaric acid.
16. Write the mechanism for the nitration of benzene.
17. What is the effect of substituents on aromatic electrophilic substitution ?
18. Discuss the difference between DNA and RNA.
19. What is isoelectric point of an amino acid ? What are its features ?

(5 × 5 = 25 marks)

Section C (Essay)

Answer any one question.

The question carries 11 marks.

20. (a) How will you prepare alcohols from Grignard reagents ?
(b) What is iodoform test ?
21. Write notes on :
 - (a) Dow's process.
 - (b) Kolbe's electrolysis.
 - (c) Sandmeyer reaction.
 - (d) Hofmann's Carbylamine reaction.

(1 × 11 = 11 marks)