

D 12004

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Name.....

Reg. No.....

THIRD SEMESTER (CBCSS—UG) DEGREE EXAMINATION, NOVEMBER 2021

Chemistry/Industrial Chemistry/Polymer Chemistry

CHE 3C 03—ORGANIC CHEMISTRY

(2019—2020 Admissions)

Time : Two Hours

Maximum : 60 Marks

Section A (Short Answers)*Answer at least **eight** questions.**Each question carries 3 marks.**All questions can be attended.**Overall Ceiling 24.*

1. What are free radicals ? How are they formed ?
2. Which is more acidic, acetic acid or chloroacetic acid ? Why ?
3. What are enantiomers ?
4. Write the possible conformations of ethane. Which is more stable ?
5. What is Wurtz reaction ?
6. How will you prepare phenol from chlorobenzene ?
7. Which is more basic, ammonia or methyl amine ? Why ?
8. What are zwitter ions ? Give examples.
9. What are enzymes ? Give examples.
10. What do you mean by 1° structure of a protein ?
11. What is isoprene rule ?
12. Write the structure of citral and menthol.

(8 × 3 = 24 marks)

Section B (Short Answers)*Answer at least **five** questions.**Each question carries 5 marks.**All questions can be attended.**Overall Ceiling 25.*

13. What is inductive effect ? What are its characteristics ?
14. What are geometrical isomers ? How are they distinguished ?

Turn over

15. State Huckel's rule. Apply Huckel's rule to predict the aromaticity of benzene and naphthalene.
16. How will you prepare 1°, 2° and 3° alcohols using Grignard reagent ?
17. Explain Lucas test for distinguishing 1°, 2° and 3° alcohols.
18. What is Hofmann's Bromamide reaction ?
19. Explain the difference between DNA and RNA.

(5 × 5 = 25 marks)

Section C (Essay)

*Answer any **one** question.*

The question carries 11 marks.

20. How benzene diazonium chloride is prepared ? Discuss the synthetic applications of benzene diazonium chloride.
21. Discuss the mechanism of the following aromatic electrophilic substitutions
Halogenation
Nitration
Sulphonation
Friedel Craft's alkylation.

(1 × 11 = 11 marks)