D 12004 (Pages : 2) 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 meant 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)