QP CODE: 19101742

19101742

Reg No : .....

Name : .....

B.Sc. DEGREE (CBCS) EXAMINATION, MAY 2019

Second Semester

Complementary Course - **CH2CMT02 - CHEMISTRY - BASIC ORGANIC CHEMISTRY**

(Common for B.Sc Botany Model I ,B.Sc Botany Model II Environmental Monitoring And Management ,B.Sc Botany Model II Food Microbiology ,B.Sc Botany Model II Horticulture and Nursery Management ,B.Sc Family & Community Science Model I ,B.Sc Food Science & Quality Control Model III ,B.Sc Geology Model I,B.Sc Physics Model I,B.Sc Zoology Model I,B.Sc Zoology Model II Aquaculture,B.Sc Zoology Model II Food Microbiology,B.Sc Zoology Model II Medical Microbiology,B.Sc Geology and Water Management Model III,B.Sc Botany Model II Plant Biotechnology,B.Sc Food Technology & Quality Assurance)

2017 ADMISSION ONWARDS

3ED58C63

Maximum Marks: 60 **Time: 3 Hours**

Part A

Answer any **ten** questions.

Each question carries **1** mark.

1. Write the IUPAC name:
   (i) CH_3-CH_2-CH=CH-CHO, (ii) $(CH_3)_2CHCOCH(CH_3)_2$
2. Differentiate between homolytic and heterolytic clevage.
3. Write the intermediates formed during the heterolytic clevage of CH_3Br.
4. Define polar covalent bond.
5. What is Baker Nathan effect?
6. Give the product of the reaction: CH_3-CH_2-CH_2-CH_2-Cl + alc.KOH →
7. What is isomerism?
8. Explain E, Z nomenclature.
9. What is racemic modification?
10. What is meant by alternating copolymer?
11. Why are commercial grades of PVC incorporated with stabilizers?
12. What is gutta-percha?

(10×1=10)

Part B

Answer any **six** questions.

Each question carries **5** marks.

13. What is homologous series? What are its characterestics?
14. Write a brief account on different types of organic reactions using suitable examples
15. What is steric effect? Explain the role of steric hindrance in determing the rate of organic rection using suitable examples.
16. Explain S_N1 mechanism using suitable example
17. Explain the mechanism of addition of Br_2 to alkenes using an example.
18. How meso and (dl)- tartaric acid is prepared from maleic and fumaric acid
19. Sketch the sawhorse and Newmann projections of eclipsed conformation of ethane
20. Write a note on torsional energy
21. Write a short note on biodegradation of polymers.

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **10** marks.

22. (i) Define (a) chain isomerism (b) position isomerism (c) functional group isomerism
    (ii) Write all the possible chain isomers of alkane having the molecular formula C5H12. Give the IUPAC name of all the isomers.
    (iii) Indicate which kind of isomerism is exhibited by following set of compounds:
    (a) CH_3-CH_2-CH_2-CHO & CH_3-CO-CH_2-CH_3
    (b) 2-pentanone and 3-pentanone
    (c) CH_3-O-CH_3 & CH_3-CH_2-OH
    (d) 1,2-dibromobenzene & 1,3-dibromobenzene
23. Explain the mechanism and types of electrophilic substitution reactions of benzene.
24. . Describe the optical isomerism with suitable examples
25. Discuss the preparation and applications of synthetic rubbers Buna N and Neoprene.

(2×10=20)