QP CODE: 19102027

19102027

Reg No : .....

Name : .....

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

Third Semester

CORE COURSE - CH3CRT03 - ORGANIC CHEMISTRY-I

(Common to B.Sc Chemistry Model I, B.Sc Chemistry Model II Industrial Chemistry, B.Sc Chemistry Model III Petrochemicals)

2017 Admission Onwards

A1866014

Maximum Marks: 60 Time: 3 Hours

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. Write the IUPAC name of a) 2-bromo-5 methyl-1,3,5-hexatriene b)2-methyl-1,3-butadiene
2. Write the formula to determine the formal charge
3. What is meant by chirality?
4. Illustrate the term Internal compensation?
5. Draw the conformations of cyclohexane molecule
6. How can you relate the dihedral angle and stability of a molecule with respect to ethane?
7. Convert 1,2 diphenyl ethanol to stilbene
8. What happens when vapours of alcohol are passed over heated calcium carbide?
9. What are Grignard reagents?
10. Nitrating mixture used for the nitration of Benzene to Nitrobenzene is .....
11. What happens when benzene is treated with
    a) phthalic anhydride and b) succinic anhydride ?
12. What is the role of dienophile in a Diels -alder reaction?

(10×1=10)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Briefly discuss +M and -M effect

14. What are the different types of organic reactions?

15. Briefly explain the optical activity of biphenyls

16. Write briefly on the different methods of resolution

17. How will you synthesise n-butane from the following
a) Ethyl bromide b) n-butyl bromide c) 2- butene

18. Explain Saytzeff Elimination with mechanism and two examples.

19. Explain why pyrene with 16 π electrons is also considered as aromatic compound

20. Sulphonation of naphthalene gives naphthalene -1- sulphonic acid at 80^{o} C and naphthalene -2- sulphonic acid at 160^{o} C.- Explain

21. Explain the stereochemistry involved in the formation of 1,3- cyclohexadiene from cis -1,3,5- hexatriene

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Briefly explain the formation of reactive intermediates

23. Comment on the stability of cyclohexane and its derivatives with emphasis to methyl cyclohexane

24. Discuss the mechanism and stereochemistry of bimolecular nucleophilic substitution

25. Discuss the mechanism of nitration of chlorobenzene and predict the position of the incoming nitro group.

(2×10=20)