QP CODE: 20100031

20100031

Reg No : .....

Name : .....

BSc DEGREE (CBCS) EXAMINATION, FEBRUARY 2020

Fifth Semester

Core Course - CH5CRT06 - ORGANIC CHEMISTRY-III

B.Sc Chemistry Model I ,B.Sc Chemistry Model II Industrial Chemistry ,B.Sc Chemistry Model III Petrochemicals

2017 Admission Onwards

A99ED2C3

Time: 3 Hours | Maximum Marks :60

Part A

*Answer any **ten** questions.*

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

1. What is Borsche's reagent?
2. Give an example for phase transfer catalyst.
3. Arrange in the order of increasing basic strength: $(CH_3)_3N$, NH_3, CH_3NH_2 and $(CH_3)_2NH$.
4. $N_2CHCOOEt + HCl \rightarrow ?$
5. Represent the following compounds in the increasing order of their aromatic character. Thiophene,Furan,Pyrrole
6. Give the structure of an enamine.
7. Write the chemical equation for the reaction between glucose and Fehling solution.
8. Name the polysaccharide which yields β-glucose upon hydrolysis.
9. Give the name and structure of any two suplha drugs.
10. What are stimulants? Give one example
11. What is an Azo Dye?
12. Distinguish between Homopolymers and Heteropolymers.

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. Discuss reductive amination of aldehydes and ketones with mechanism.

14. How will you convert aniline to biphenyl? Give mechanism of final step.

15. Explain the electrophilic and nucleophilic substitution reactions of quinoline.

16. Explain a method for the preparation of ethylacetoacetate.

17. What are osazones? How are they prepared?

18. How are the following conversions effected (a) Fructose to Glucose. (b) Glucose to Mannose

19. Write briefly on antimalarials and antacids.

20. How will you prepare Rosaniline? To which class does this dye belong? What is its use?

21. Explain briefly on Environmental hazards and biodegradability of polymers.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Discuss the mechanism of electrophilic substitution reactions-chlorination, nitration and sulphonation in aniline.

23. Discuss the electrophilic and nucleophilic substitution reactions of pyridine. Also give the molecular orbital concept regarding its structure.

24. (a) What are disaccharides? Draw the cyclic structure of (i) maltose (ii) cellobiose and mention the monosaccharide units present in it.
(b) Biiefly explain the reactions and uses of sucrose.

25. Discuss the preparation, structure and applications of the following polymers.
    (a) PET
    (b) Phenol -formaldehyde Resin
    (c) Urea-Formaldehyde Resin

(2×10=20)