21101580

QP CODE: 21101580

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) SPECIAL SUPPLEMENTARY EXAMINATION, JULY 2021

Fifth Semester

CORE COURSE - CH5CRT06 - ORGANIC CHEMISTRY-III

Common for B.Sc Chemistry Model I, B.Sc Chemistry Model II Industrial Chemistry & B.Sc Chemistry Model III Petrochemicals

2018 Admission Only

354F117F

Time: 3 Hours

Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. The reagent used for quantitative determination of nitro groups in a compound is...
2. Give the product when nitromethane is reduced with Zn and HCl.
3. Suggest a reagent to convert benzene diazonium chloride to chlorobenzene.
4. Give an example for a methylating agent in organic synthesis.
5. How is tetra hydrofuran obtained from Furan?
6. What is the intermediate formed in a Claisen ester condensation in preparation of ethyl acetoacetate?
7. Write two reactions which indicate the presence of an aldehydic group in glucose ?
8. What are the products obtained when sucrose is subjected to acid hydrolysis?
9. Name a broad spectrum antibiotic and state two diseases for which it is prescribed.
10. Draw the structure of ibuprofen. In which class of drugs does it belong?
11. What are edible dyes? Give one example.
12. Write the structure of monomer of PVC.

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. Illustrate Gabriel's phthalimide reaction with mechanism.

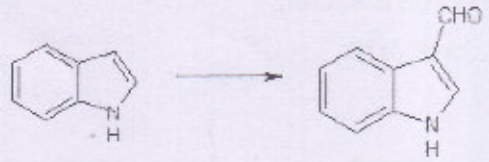
14. What is Hinsberg reagent? What is its industrial importance?

15. (a) How will you convert the following?

(i)



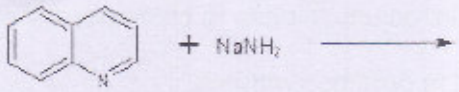
(ii)



(iii)



(b) Predict the product formed and explain the orientation of the reaction:



16. How will you convert malonic ester into (a) Pentanoic acid (b) Succinic acid and (c) Crotonic acid?

17. What are carbohydrates? How are they classified?

18. Write briefly on the structure of starch.

19. Write a note on drug addiction, abuse and its remedies.

20. How are dyes classified on the basis of structure? Give one example in each case.

21. Distinguish between thermoplastics and thermosetting plastics.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Discuss the various factors that affect the basicity of aliphatic and aromatic amines.

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

24. How are the following conversions effected (a) Aldopentose to Aldohexose (b) Aldose to Ketose (c) Aldose to its epimer (d) Ketose to Aldose (e) Aldohexose to aldopentose

25. (a) Discuss the preparation and application of the synthetic rubbers:

    (i)SBR

    (ii)Neoprene

    (b)What are conducting polymers? Explain with suitable example.

(2×10=20)