QP CODE: 25003378

25003378

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) SPECIAL REAPPEARANCE EXAMINATIONS, FEBRUARY 2025

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

2022 Admission Only

9B36A347

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. Name the compound – $O_2NCH_2CH(C_6H_5)CH_2COOC_2H_5$
2. m-dinitrobenzene + ? → m-nitroaniline.
3. $CH_3CONH_2 + Br_2 + 4KOH \rightarrow ?$
4. What is Hinsberg reagent?
5. What are heterocyclic compounds?
6. What is the intermediate formed in a Claisen ester condensation in preparation of ethyl acetoacetate?
7. What are reducing sugars? Give example.
8. What is the product obtained when glucose is refluxed with acetic anhydride?
9. What are broad spectrum antibiotics? Give example.
10. Draw the structure of ibuprofen. In which class of drugs does it belong?
11. What is meant by auxochrome? Give two examples.
12. What is nitrile rubber? Mention any two uses.

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. Compare the properties of aliphatic and aromatic amines.

14. How will you prepare phenyl hydrazine? Give its uses.

15. (a) Discuss the molecular orbital structure of pyrrole.
(b)With suitable reactions show that pyrrole behaves like an amphoteric compound.

16. How will you convert cyanoacetic ester into (a) Malonic acid (b) Succinic acid and (c) alpha-beta unsaturated acid?

17. Explain the chain lengthening and shortening of aldoses with examples.

18. What are disaccharides? Draw the structure of any two disaccharides, name them and mention the monosaccharide units present in each one.

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

20. Write the method of preparation of Indigotin and explain how it is applied on the Fabric.

21. Write briefly on classification of polymers.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. What is a coupling reaction? How it is used prepare following azo compounds;
(a) p-hydroxyazobenzene (b) methylorange (c) p-N,N-dimethylaminoazobenzene

23. Write notes on:
    (a) Fischer's indole synthesis
    (b) Friedlander's synthesis
    (c) Bischler-Napieralski Synthesis

24. What are polysaccharides? Draw the structure of cellulose and discuss its industrial applications.

25. (a) How are Novolac and Resole resins prepared? Explain the reactions and mention their important uses.
(b) Differentiate between LDPE and HDPE.

(2×10=20)