QP CODE: 24028950

24028950

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS

OCTOBER 2024

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

2017 Admission Onwards

424FCF62

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. Draw the structure of TNT.
2. Give the product when nitromethane is reduced with Zn dust and NH4Cl.
3. Name the compound – C6H5CH2N(CH3)2.
4. Give an example for phase transfer catalyst.
5. Name the products formed when (a) pyrrole and (c) pyridine are catalytically hydrogenated.
6. Draw the structure of ethyl cyanoacetate.
7. Differentiate between sugars and non-sugars.
8. Give two examples for disaccharides.
9. Draw the structure of ampicillin.
10. Name the class of drugs which reduce the body temperature. Give example.
11. Name two natural food colourants.
12. Give two examples of initiators used in free radical polymerization.

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. How will you convert aniline to acetanilide? Explain with mechanism.

14. Which is more basic ethylamine or aniline? Justify your answer.

15. (a) Discuss the orientation of electrophilic substitution reactions of Furan in terms of relative stability of the intermediate.

(b) Explain how furan reacts with

(i) Pyridine-Sulphur trioxide (ii) HCl-HCN

(iii) Alkaline C6H5N2+Cl- (iv) Acetylnitrate

16. Explain a method for the preparation of ethylacetoacetate.

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

18. Discuss briefly on the industrial applications of cellulose.

19. Write briefly on psychotropic drugs.

20. What are Mordant,Vat and Ingrain dyes? Give one example in each case.

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. How will you convert ethanoic acid to propionic acid using diazomethane? Discuss the mechanism involved in detail.

23. Write notes on:

(a) Fischer's indole synthesis

(b) Friedlander's synthesis

(c) Bischler-Napieralski Synthesis

24. Discuss briefly on the structure of fructose giving emphasis to the open chain and cyclic structures.

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)