

TB145150E

Reg. No.....

Name.....

**B. Sc. DEGREE (C.B.C.S.S) EXAMINATION, NOVEMBER 2018**

**(2014 Supplementary)**

**SEMESTER V - CORE COURSE (CHEMISTRY)**

**CHE5BOC – BASIC ORGANIC CHEMISTRY-II**

**Time: Three Hours**

**Maximum Marks: 60**

**PART A**

**I. Answer all questions. Each question carries 1 mark.**

1. Explain Arndt –Eistert synthesis
2. Explain reductive amination of aldehydes and ketones.
3. Fluorescein dye belongs to a class of -----
4. Emission of light as a result of chemical reaction is:-----
5. Give an example for polyamide
6. The drug used to get relief from pain are called -----
7.  $\text{SeO}_2$  oxidises methyl group at the  $\alpha$  position into ----- group
8. The fundamental vibrational frequency ----- with increase in the bond strength.

**(8 × 1 = 8)**

**PART B**

**II. Answer any six questions. Each question carries 2 marks.**

9. Explain the preparation and uses of phenyl hydrazine.
10. Explain the preparation and uses of diazonium compounds.
11. Give one method of preparation of Indigo.
12. Explain Photo Fries rearrangement.
13. How is polyurethanes prepared?
14. Give a brief account of stability and structure of Butadiene.
15. What are the advantages of detergents over soap?
16. What are antipyretics? Give example.
17. What is Schiff's reagent? What is its importance?
18. Name the types of electronic transitions in UV-Vis spectroscopy. Arrange them in the increasing order of energy.

**(6 × 2 = 12)**

**PART C**

**III. Answer any four questions. Each question carries 4 marks.**

19. a) Explain the basic nature of amines. What are the factors affecting the basicity of amines.  
b) What is meant by i) Gabriel's Phthalimide synthesis ii) Hoffmann's Bromamide reaction
20. Classify dyes based on the structure and method of application.

21. a) Briefly explain Norrish type reactions.  
b) Write briefly on the synthesis of Buna-S and Nylon 6,6
22. a) Discuss the cleansing action of detergents.  
b) What are sulpha drugs? Name two sulpha drugs and their mode of action.
23. Give the preparation and applications of LDA.
24. What are the factors affecting vibrational frequency in a bond?

(4 × 4 = 16)

#### PART D

#### IV. Answer any two questions. Each question carries 12 marks.

25. Explain the following a) Gomberg reaction b) Schiemann reaction c) Sandmeyer's reaction d) Mendius reaction
26. a) Give one method each for the preparation of 1) Alizarin 2) Bismark brown 3) Phenolphthalein  
b) Give synthesis and applications of 1) Epoxy resins 2) polyhalo olefins 3) polyesters.
27. a) What are drugs? Give classification of drugs with examples.  
b) Explain the chemistry when an aliphatic aldehydes is warmed with Fehling solution.
28. a) What is the basic principle of UV-Vis spectroscopy? How will you distinguish between conjugated and non-conjugated dienes using UV-Vis spectroscopy.  
b) Assign the structure of a compound with molecular formula  $C_{10}H_{13}Cl$  consistent with the following NMR data : i)  $\delta$  1.5 (6H singlet) ii)  $\delta$  3.07 (2H singlet) iii)  $\delta$  7.27 (5H singlet)

(2 × 12 = 24)