

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2018

(CUCBCSS—UG)

Chemistry

CHE 5B 07—ORGANIC CHEMISTRY—II

Time : Three Hours

Maximum : 80 Marks

Section A

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

1. Reaction of Phenol with Chloroform and Sodium Hydroxide gives _____.
2. Conversion of Carboxylic acid into α -halo acid takes place by _____.
3. Reagent used in separation of amines by Hinsberg method is _____.
4. The IUPAC name of Neopentyl Chloride is _____.
5. Write the structural formula of But-2-en-1-oic acid.
6. Lucas re-agent is a mixture of _____.
7. Glycol when heated with anhyd. ZnCl_2 gives _____.
8. Liebermann's test is a diagnostic test for _____.
9. Metal used in Wurtz reaction is _____.
10. Alkyl Magnesium halide is also known as _____.

(10 × 1 = 10 marks)

Section B

*Answer any ten questions.
Each question carries 2 marks.*

11. Discuss the classification of Heterocyclic compounds.
12. Discuss the structure of Furan according to resonance concept.
13. What is Victor Meyer's test ?
14. How would you carry out the conversion of Glycerol to Isopropyl Iodide ? Give the different steps required for the conversion.
15. How will you distinguish between Oxalic acid and Succinic acid ?

Turn over

16. How will you distinguish between Acetaldehyde and Acetone ?
17. Write S.N. on Aldol condensation.
18. What is HVZ reaction ?
19. How is Citric acid prepared from Glycerol ?
20. Illustrate the term trans-esterification.
21. Benzoyl Chloride is hydrolysed at much slower rate than Acetyl Chloride. Why ?
22. What is Claisen condensation ?

(10 × 2 = 20 marks)

Section C

*Answer any five questions.
Each question carries 6 marks.*

23. Write S.N. on Fischer Indole Synthesis.
24. How will you prepare :
 - (a) Furan from Furoic acid.
 - (b) Furan from Furfural.
25. How will you distinguish between primary, secondary, tertiary alcohols by :
 - (a) Lucas test.
 - (b) Victor-Meyer method.
26. Write a note on electrophilic substitution reaction of Aniline.
27. (a) How is Eosin prepared ?
 - (b) Give the use of Alizarin as dyestuff.
28. (a) Give the preparation of Alizarin.
 - (b) What is Diazotisation ?
29. (a) What is Reimer-Tiemann reaction.
 - (b) How will you prepare iodoform ?
30. (a) Explain, why an Alkyl Halide is more reactive than Vinyl Chloride.
 - (b) How will you obtain Cinnamic acid by Knoevangel reaction.

Section D

Answer any **two** questions.
Each question carries 10 marks.

31. Write S.N. on the following reactions :
- (a) Kolbe's reaction.
 - (b) Wolf-Kishner reaction.
 - (c) Hofmann's Bromamide reaction.
 - (d) Beckmann re-arrangement.
 - (e) MPV reduction.
32. (a) Discuss briefly the structure and reactivity of Carbonyl group. (5 marks)
- (b) Outline the preparation of primary, secondary and tertiary alcohol using Grignard reagent. (5 marks)
33. (a) Explain the effect of substitution on the acidity of Carboxylic acids. (4 marks)
- (b) How will you prepare α - hydroxy acids ? How will you convert lactic acid into :
- (a) Propanoic acid.
 - (b) Lactide. (6 marks)
34. (a) Write a note on Net's Carbonyl Synthesis. (3 marks)
- (b) How will you convert phenol into quinol. (3 marks)
- (c) What is Hofmann and Saytzeff elimination ? (4 marks)
- [2 × 10 = 20 marks]