

**B.Sc. DEGREE END SEMESTER EXAMINATION MARCH/APRIL 2019****SEMESTER – 4: CHEMISTRY (CORE COURSE)****COURSE: 15U4CRCHE04: ORGANIC CHEMISTRY II***(Common for Regular 2017 admission and improvement 2016/ supplementary 2016/2015 admission)*

Time: Three Hours

Max. Marks: 60

**SECTION A***Answer all the questions. 1 mark each*

1. Fenton's reagent is.....
2. How many di-derivatives containing the same substituent are given by naphthalene?
3. The carbon atom of carbonyl group is .....hybridized.
4. Ziesel method is used to estimate.....group in an organic compound.
5. What is the product formed when malonic acid is heated with P<sub>2</sub>O<sub>5</sub>?
6. Write the structure of guanidine.
7. In Victor-Meyer's test, blue colour is shown by .....

**SECTION B***Answer any Six questions. 2 marks each*

9. Methyl ketones are easily identified by iodoform test. Illustrate.
10. Name the product formed when but-1-ene is subjected to hydroboration-oxidation. Write the equation.
11. How is ethylene oxide prepared?
12. Explain why organolithium compounds are more reactive than Grignard reagents?
13. How is adipic acid prepared industrially?
14. How will you convert thiourea into urea?
15. Explain why polynuclear hydrocarbons are more reactive than benzene?
16. Give reason for the higher boiling point of ethanol in comparison to methoxymethane.

(2 × 6 = 12)

**SECTION C***Answer any Four questions. 5 marks each*

17. Write a note on (i) Cannizaro reaction and (ii) Perkin reaction.
18. Discuss the mechanism of Fries Rearrangement.
19. How will you prepare anthranilic acid? Discuss its properties and uses.
20. 3-Methylbutan-2-ol is subjected to acid catalysed dehydration. What is the major product? Explain.
21. How will you synthesize citric acid from a trihydric alcohol?
22. How is malonic ester prepared? Comment on the keto-enol tautomerism in malonic ester.

(5 × 4 = 20)

## SECTION D

Answer **any Two** questions. **10** marks each

23. How are the following conversions effected:
- (i) Adipic acid to Nylon-66.
  - (ii) Malonic acid to n-butyric acid.
  - (iii) Toluene to Chloramine-T.
  - (iv) Allyl alcohol to acrylic acid.
- 24.
- (i) Write a note on absolute alcohol and power alcohol. (2 marks)
  - (ii) How will you distinguish between phenol and alcohol? (3 marks)
  - (iii) What is Lucas reagent? How is it used to distinguish primary, secondary and tertiary alcohols? (5 marks)
- 25.
- (i) Give an account of the nucleophilic addition reactions of aldehydes and ketones.
  - (ii) Explain MPV reduction and Haloform reaction?
26. Describe the preparation, properties and synthetic application of acetoacetic ester. (10 × 2 = 20)

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