## B.Sc DEGREE (CBCS) EXAMINATION, MAY 2019

### Fourth Semester

### Core Course - CH4CRT04 - ORGANIC CHEMISTRY-II

(Common for B.Sc Chemistry Model I ,B.Sc Chemistry Model II Industrial Chemistry ,B.Sc Chemistry Model III Petrochemicals)

2017 Admission onwards

6FED4906

**Maximum Marks: 60**                                                                                           **Time: 3 Hours**

### Part A

Answer any **ten** questions.

Each question carries **1** mark.

1.      What is the product obtained in the reaction of ethanol and  Con. H2SO4 at 413K ?.

2.      What is the action of  alkaline KMnO4 on allyl alcohol?

3.      What is  a gem-diol ? Give any one example

4.       Write the product obtained when phenol is treated with CCl4 and alkali

5.      Convert acetonitrile to acetaldehyde.

6.      Convert benzaldehyde to Mandelic acid.

7.      What is crotonaldehyde? How is it prepared?

8.      Mention one of the uses of iodoform test in organic chemistry.

9.      Give the product of hydrolysis of Ethyl ethanoate

10.      Which is more acidic ? acetic acid or chloro acetic acid . Why?

11.      What is oil of winter green? How is it formed?

12.      How will you synthesise fumaric acid from malonic acid?

(10×1=10)

### Part B

Answer any **six** questions.

Each question carries **5** marks.

13.      Describe the preparation of Phenol from  (i)Cumene  (ii) Diazonium salt

14.      What are Epoxides? Give any two preparation methods

15.      Explain briefly the Ziesel method for the estimation of alkoxy group.

16.      What is benzophenone? Predict the products  when benzophenone reacts with
      a) Zn/acetic acid  b)  Zn-Hg/HCl  c) Zn and KOH

17.       Write the mechanism and two examples of Wittig reaction.

Predict the products in the following conversions. Write down the mechanism involved in it

18.
a) $H_2C=CH-CH=O + CH_3NO_2 \xrightarrow{C_2H_5O^-}$ ?

b) $H_2C=CH-CH=O + H_2C(COOC_2H_5)_2 \xrightarrow{C_2H_5O^-}$ ?

19. Briefly explain the reactions of acetyl chloride with ammonia and amines

20. What is phenolphthalein? How is it prepared?

21. How will you convert toluene to p-toluene sulphonyl chloride?

(6×5=30)

## Part C

Answer any **two** questions.

Each question carries **10** marks.

22. Give any one preparation method and two uses of the following
    a) Resorcinol    b) Quinol     c) nitrophenol    d) picric acid

23. Explain the mechanism of reduction of
    a) Carbonyl compounds by $LiAlH_4$     b) Wolf-Kishner reduction
    c) Carbonyl compounds by Aluminium isopropoxide

24. Write the mechanism of the following
    a) Perkin reaction
    b) Reformatsky reaction
    c) Claisen condensation

25. Suggest a method of synthesis for the following compounds from toluene

    a. Chloramine T  b) saccharin c)*o*- and p- toluene sulphonyl chloride

(2×10=20)