

- 19 What is Fries rearrangement ? Explain.
- 20 How will you prepare catechol ?
- 21 What is iodoform reaction ? Explain.
- 22 How will you prepare Thiourea ?
- 23 Explain Reformatsky reaction.
- 24 What is Hell-Volhard Zelinsky reaction.

(5 × 1 = 5)

Section C

Answer any **four** questions.
Each question carries a weight of 2.

- 25 Phenol is acidic. Why ? Also explain the effect of substituents on the acidity of phenol.
- 26 Discuss the aromaticity of Anthracene based on the structure.
- 27 Explain the reactions of oxalic acid with Glycerol. Also write the equations involved.
- 28 Explain the mechanism of Benzoin condensation and Pinacol-Pinacolone rearrangement.
- 29 Discuss the mechanism of Wolf-Kishner reduction.
- 30 Carboxylic acid is acidic. Why ? Discuss the effect of substituents on the acidity of aromatic acids.

(4 × 2 = 8)

Section D

Answer any **two** questions.
Each question carries a weight of 4.

- 31 Discuss the following with mechanisms :
 - (i) Baeyer-Villiger oxidation.
 - (ii) Lederer-Mannase reaction.
 - (iii) Perkin reaction.
- 32 Explain any *two* synthetic applications each of (i) Cyanoacetic acid ; (ii) Acetoacetic ester.
- 33 How will you prepare the following ?
 - (i) Anthranilic acid from Naphthalene.
 - (ii) Cinnamic acid by applying Knoevenagel reaction.
 - (iii) O and P Toluene sulphonyl chloride.
 - (iv) Acrylic acid from acetylene.

(2 × 4 = 8)

E 2787

(Pages : 2)

Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH/APRIL 2012

Fourth Semester

Core Course—BASIC ORGANIC CHEMISTRY—I

(Common for B.Sc. Chemistry Model I and Model II, B.Sc. Petrochemicals and
B.Sc. Chemistry—Environment and Water Management)

Time : Three Hours

Maximum Weight : 25

Write equations wherever necessary.

Section A

Answer all questions.

Each bunch of four questions carries a weight of 1.

Fill up the blanks :

- I. 1 Chemical formula of Picric acid is _____.
- 2 Two isomeric Naphthols are _____.
- 3 Malonic acid is obtained from _____ by Hydrolysis.
- 4 When cinnamic acid is treated with Br_2 water, the product formed is _____.
- II. 5 Write one specific application of Lithium Aluminium Hydride (Li Al H_4).
- 6 Draw the structure of 9, 10 anthraquinone.
- 7 Write the product formed when urea reacts with Hydrazine.
- 8 Give one use of semicarbazide.
- III. 9 Write the products formed when Benzamide is heated with NaOH solution.
- 10 Name the product formed when formaldehyde is treated with Phenol in presence of alkali.
- 11 What is the use of Zeisel's method ?
- 12 Write the reagents in Reimer-Tiemann reaction.
- IV. 13 Draw the structure of Coumarin.
- 14 Write the Tautomeric forms of ethyl acetoacetate.
- 15 Mention a synthetic application of alkyl Lithium.
- 16 Carboxylate ion is stable due to.

(4 × 1 = 4)

Section B

Answer any five questions.

Each question carries a weight of 1.

- 17 How will you convert Propanol to Ethanol ?
- 18 Explain the Basicity of Guanidine.

Turn over