GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- III(NEW)EXAMINATION - SUMMER 2015

Subject Code: 2133605 Date:29/05/2015

Subject Name: Organic Chemistry for Technologists

Time: 02.30pm-05.00pm Total Marks: 70

Instructions:

- 1. Attempt all questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.
- Q.1 (a) Explain Aldol and Cross aldol reaction with mechanism.
 - (b) How will you synthesize Phenol? Give its chemical reaction. 07
- Q.2 (a) Write a note on: Carbocation 07
 - (b) 1. Define Electrophile and Nucleophile

 2. What is assential difference between a free radical reaction and an ionic reaction

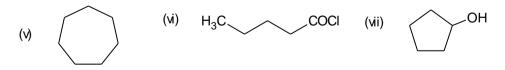
 05

2. What is essential difference between a free radical reaction and an ionic reaction. **05**

- OR
 (b) What products are obtained by reduction of nitrobenzene under different conditions? 07
- Q.3 (a) 1. Give only chemical reaction for following conversion:
 - a. Toluene → Saccharin
 - b. Benzene → Benzenesulfonic acid
 2. Discuss the mechanism of sulfonation of benzene.
 03
 - (b) Who were the pioneers of Alkylation & Acylation reaction? Explain its mechanism. 07

OR

- **Q.3** (a) Write a note on:
 - a. Cannizzaro reaction 04
 - b. Diazotization reaction 03
 - (b) Explain the reaction between Propene and HBr with mechanism. 07
- Q.4 (a) Write the IUPAC names for each of the following compounds:
 - (i) H_3C (ii) H_3C (iv) H_3C COOH (iv) H_3C CH_3



- **(b)** 1. What happens when;
 - a. Aniline is treated with nitrous acid at $0-5^{\circ}$ C
 - b. Phenol is heated with CCl₄ in the presence of NaOH Solution and then with dilute HCl?
 - 2. How will you synthesized Sulfanilamide from Aniline?

04

07

