

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. - SEMESTER – III • EXAMINATION – WINTER 2012****Subject code: 130404****Date: 04-01-2013****Subject Name: Organic Chemistry & Unit Processes****Time: 10.30 am – 01.00 pm****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) Give details of SN^1 & SN^2 reactions with mechanism. 07
(b) Explain preparation of acetic acid by fermentation process. 07
- Q.2** (a) Discuss Killiani-Fischer's synthesis of Glucose. 07
(b) Write a note on various processes to concentrate ore. 07
- OR**
- (b) Explain with suitable example E1 & E2 reactions. 07
- Q.3** (a) Discuss optical activity & optical isomerism. 07
(b) Give classification of carbohydrates with examples. 07
- OR**
- Q.3** (a) Explain Geometrical isomerism with examples. 07
(b) What are isomers? Explain Enantiomers & Diastereomers in detail 07
- Q.4** (a) Define: Electrophile & Nucleophile. Write a note on Sulphonation of benzene. 07
(b) Explain 1,2 & 1,4 Addition reactions. 07
- OR**
- Q.4** (a) Explain hybridization in methane & ammonia. 07
(b) Prepare m-dinitrobenzene from benzene. Draw resonating structures involved in the reaction. 07
- Q.5** (a) Explain covalent bond formation in detail. 07
(b) Write reaction & mechanism of Ester -formation from carboxylic acid. 07
- OR**
- Q.5** (a) Discuss Halogenation in toluene in presence of light & in presence of a catalyst. 07
(b) Write reaction mechanism of Friedle-Craft's alkylation & acylation. 07
