

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER- IV(NEW) EXAMINATION – SUMMER 2015

Subject Code: 2143607**Date: 26/05/2015****Subject Name: Unit Processes in Organic Synthesis****Time: 10:30am-1.00pm****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) Define unit process and discuss manufacturing of nitrobenzene from benzene by continuous nitration process. **07**
(b) Describe Nomenclature, Properties and Biological importance of heterocyclic compounds. **07**
- Q.2** (a) What is amination by reduction? Discuss various chemical and physical factors affecting an amination by reduction. **07**
(b) Differentiate sulphonation and sulphation. Explain sulphation of lauryl alcohol with important uses. **07**
- OR**
- (b) Classification of amine. Explain preparation, properties and industrial application of amine. **07**
- Q.3** (a) Explain unit process for Hydrogenation and Halogenation with suitable example and process parameters. **07**
(b) Define alkane and explain preparation, properties and uses of any two examples of alkanes. **07**
- OR**
- Q.3** (a) Describe the method of preparation, properties and uses of alkenes. **07**
(b) Explain unit process for alkylation with industrial applications. **07**
- Q.4** (a) What is Thiols? Briefly describe the manufacturing process with properties and uses of thiols. **07**
(b) Explain unit process for Polymerisation with important uses in details. **07**
- OR**
- Q.4** (a) Discuss about the general physical and chemical properties of carboxylic acids. **07**
(b) Write preparation, properties and uses of any two six members ring of heterocyclic compounds. **07**
- Q.5** (a) What is haloalkane? Discuss chemistry of any two examples of haloalkanes. **07**
(b) Give preparation, properties and industrial application of any two examples of alcohols. **07**
- OR**
- Q.5** (a) What do you mean by hetero atoms? Explain chemistry of any two five members ring of heterocyclic compounds. **07**
(b) Describe chemistry of aldehyde and ketone with suitable examples. **07**
