Seat No.: _____ Enrolment No._____

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 amy 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 meant 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**

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