Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV(New) EXAMINATION – SUMMER 2016

Subject Code:2140506 **Date:01/06/2016**

Subject Name:Chemical Process Industries -II

Time:10:30 AM to 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.**
4. **Draw neat diagram where necessary.**

			MARKS
Q.1		**Short Questions**	**14**
	1	Percentage of alcohol in beer may be around……..percent	
	2	Yeast is used in the manufacture of ……	
	3	Which of the constituent of vinegar?	
	4	Massecuite is……	
	5	Which oil is preferred for paint manufacture?	
	6	Penicillin is made employing …….. fermentation process.	
	7	High magnesia lime is added to hot sugar cane to…..	
	8	Chemical name of aspirin is……..	
	9	Pure rectified spirit contains about…….percent alcohol.	
	10	Hemoglobin is a/an ……..	
	11	Other name of Methyl Salicylate is ……..	
	12	Penicillin, an antibiotic drug was discovered by……..	
	13	All enzymes are made of ……	
	14	Penicillin is separated from fermented broth by…….	
Q.2	**(a)**	Write complete chemical reaction for manufacture of vat dyes.	**03**
	(b)	Discuss structure of dye.	**04**
	(c)	Describe in detail manufacture of H-acid from KOCH acid with chemical reaction and neat clean flow diagram.	**07**
		OR	
	(c)	Discuss method of production of Indanthrene yellow dye.	**07**
Q.3	**(a)**	Give a list dye-intermediates derived from benzene.	**03**
	(b)	Give the uses of (a) Disperse dyes (b) Fluorescent dyes	**04**
	(c)	Discuss the manufacture of aniline from crude nitrobenzene with chemical reaction and neat & clean flow diagram.	**07**
		OR	
Q.3	**(a)**	Write complete chemical reaction for Riboflavin.	**03**
	(b)	Write stricture formula: (a) Hexyl resorcinol (b) codeine	**04**
	(c)	Name Nitrating agents. Give a typical nitration reaction. Explain the role sulfuric acid in success of nitration reaction.	**07**
Q.4	**(a)**	Give the uses of salicylic acid & methyl Salicylate.	**03**
	(b)	Write down complete chemical reaction for Thiamine hydrochloride.	**04**
	(c)	What is an antibiotic? Discuss manufacture of penicillin with neat &clean flow sheet.	**07**
		OR	
Q.4	**(a)**	What is paint and P.V.C of paint?	**03**
	(b)	What are pigments? Write in brief on red pigments.	**04**

	(c)	Explain beer manufacture with a suitable flow diagram.	**07**
Q.5	**(a)**	List the various separation routes to produce absolute alcohol.	**03**
	(b)	What is inversion of sugar? How it can be prevented?	**04**
	(c)	With a detailed flow sheet explain the manufacturing process of sugar from sugarcane.	**07**

OR

Q.5	**(a)**	Explain in brief: Various ways of bagasse disposal.	**03**
	(b)	What are industrial coatings? Explain its applications in brief.	**04**
	(c)	What is fermentation? Discuss manufacture of industrial alcohol by aerobic fermentation process	**07**

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