

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III (New) EXAMINATION – WINTER 2018

Subject Code:2131304
Date:05/12/2018
Subject Name:Chemical Engg Processes
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.

		MARKS
Q.1	(a) What are the uses of Methanol	03
	(b) Draw only a neat flow diagram of Acetic acid manufacturing by oxidation of acetaldehyde	04
	(c) Discuss manufacturing of Furfural by hydrolysis route	07
Q.2	(a) What do you mean by the term nitric ratio?	03
	(b) Explain manufacturing of ethylene chlorohydrin	04
	(c) Discuss in detail the major engineering problems involved in Urea synthesis	07
OR		
Q.3	(c) Write down all the reactions involved in the manufacturing of Nitric acid	07
	(a) Discuss in brief the uses other than fertilizer of Urea	03
	(b) Explain in brief concentration of Nitric acid	04
	(c) Discuss the major engineering problems involved in Methanol production	07
OR		
Q.3	(a) Define Unit processes	03
	(b) Write a short note: Nickel catalyst preparation for hydrogenation of oil	04
	(c) Discuss the sources of pollution, health and safety for Nitric acid manufacturing facility	07
Q.4	(a) Write down the reactions involved for ethanol manufacturing	03
	(b) Discuss the sources of pollution for phenol manufacturing	04
	(c) Discuss with a neat flow diagram hydrogenation of cotton seed oil	07
OR		
Q.4	(a) Why copper lining is required for methanol reactor?	03
	(b) Discuss various routes for phenol manufacturing	04
	(c) Compare ethanol manufacturing via fermentation and ethylene routes	07
Q.5	(a) Write down the properties of ethylene chlorohydrin	03
	(b) Explain the sources of pollution from hydrogen cyanide production facility	04
	(c) Draw only a neat flow sheet for Cellulose acetate	07
OR		
Q.5	(a) Write down the properties of monochloroacetic acid	03
	(b) Discuss in brief method of production of hydrogen cyanide	04
	(c) Draw only a neat flow diagram for Vinyl Chloride	07
