Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-IV (New) EXAMINATION - WINTER 2015

Subject Code:2143505	Date:01/01/2016
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Subject Nam	e: Chemical	Process	Technology
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Time: 02:30pm to 05:00pm	Total Marks: 70
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Instructions:

- 1. Attempt all questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.

Q.1	(a)	Explain manufacturing process of Nitric acid with help of neat flow sheet.	07		
	(b)	Explain manufacturing process of soda ash with neat flow diagram.	07		
Q.2	(a)	Explain the manufacturing process for Methanol and major engineering problems involved.	07		
	(b)	Draw and explain a detailed flow sheet to manufacture phthalic anhydride. OR	07		
	(b)	Explain the given unit process and name of the typical industries using this process (i) Amination by ammonolysis (ii) Condensation (iii) Cyclization (iv) Esterification (v) Hydration (vi) Isomerization (vii) Reduction	07		
Q.3	(a)	Describe the manufacturing process of Benzene in detail.	07		
	(b)	Explain manufacturing process of ethylene oxide with neat flow diagram. OR			
Q.3	(a) (b)	Discuss manufacture of industrial alcohol. Elaborate the fermentation process for production of beer.			
Q.4	(a) (b)	Explain crude distillation in detail. Explain manufacture of butadiene production from n-Butane with neat flow diagram.	07 07		
		OR			
Q.4	(a)	Explain the Lime soda process in detail.	07		
	(b)	Explain manufacturing process of sulphuric acid with help of neat flow sheet.	07		
Q.5	(a)	Elaborate the fermentation process for production of Citric acid.	07		
	(b)	Give the schematic representation of given unit operation and comment on it (i) Dialysis (ii) Pelletizing (iii) Jigging (iv) Batch distillation (v) Centrifugal pump (vi) Bag Filter (vii) Centrifugation	07		
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Q.5	(a)	Which compound of urea is used as adhesive in plywoods? Describe in detail the major engineering problems faced during the production of urea?	07		
	(b)	Explain manufacturing process of vinyl chloride with neat flow diagram.	07		
