Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII(NEW) • EXAMINATION – WINTER 2016

Subject Code:2170503 **Date:23/11/2016**

Subject Name:Plant Design & Project Engineering

Time:10.30 AM to 1.00 PM **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)**	Enlist various methods of Profitability Analysis. Explain any two methods.	**07**
	(b)	Enlist the factors to be considered on total product cost estimation?	**07**
Q.2	**(a)**	Explain the cash flow diagram for an industrial plant.	**07**
	(b)	Write in brief on factors to be considered in efficient plant layout.	**07**
		OR	
	(b)	Discuss selection of size reduction equipment.	**07**
Q.3	**(a)**	Define depreciation. List methods of determining depreciation. Discuss any two in detail.	**07**
	(b)	Write short note on CPM and PERT.	**07**
		OR	
Q.3	**(a)**	Explain fault tree analysis technique for hazard assessment.	**07**
	(b)	Write short note on pipe fittings, types of valves and selection of valves.	**07**
Q.4	**(a)**	Define: auto ignition temperature, book value, lower flammability limit, Discount factor, functional depreciation. Limiting oxygen index, economic life of asset.	**07**
	(b)	Importance of utilities in chemical industry. Discuss	**07**
		OR	
Q.4	**(a)**	Explain continuous process V/s batch process.	**07**
	(b)	Write in brief about specification sheet for a distillation column.	**07**

Q.5	**(a)**	Write briefly on overhead v/s underground piping.	**07**
	(b)	Explain the six-tenths factor method for approximating the cost of equipment of Different size or capacity when one entity is known.	**07**

OR

Q.5	**(a)**	With example explain practical factors in alternative investment and replacement studies.	**07**
	(b)	Differentiate: - Standard and Special equipment.	**07**

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