

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
ME Semester –III Examination Dec. - 2011

Subject code: 731601

Date: 05/12/2011

Subject Name: Process Intensification

Time: 10.30 am – 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.

Q - 1	a.	Explain PI with its advantages.	7
	b.	Discuss 'Pointed Circuit Heat Exchanger'.	7
Q - 2	a.	Write brief on obstacles in PI.	7
	b.	Discuss PI in centrifuge.	7
		OR	
	b.	Discuss PI in drying.	7
Q - 3	a.	Discuss Divided wall column in distillation unit as process intensification tool.	7
	b.	Explain 'treated and extended surfaces' for intensified heat transfer.	7
		OR	
Q - 3	a.	Discuss HiGee for Distillation.	7
	b.	Explain fluid vibration and rotation as active enhancement methods for the heat transfer.	7
Q - 4	a.	Write Short note on intensification in Glass industry.	7
	b.	Give brief on intensification in membrane.	7
		OR	
Q - 4	a.	Discuss reactive extraction.	7
	b.	Discuss process intensification in treatment of waste water.	7
Q - 5	a.	Discuss application of PI in various process industries.	14
		OR	
Q - 5	a.	Write short note on inline/static mixers.	7
	b.	Discuss micro reactors in brief.	7
