Seat No.:	Enrolment No.

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

Subject Code:2141306		Date:19/12/2015	
Subject Name: Elements of Chemical Engineering Time: 2:30pm to 5:00pm Instructions: 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks.			
Q.1	(a) (b)	State & explain classification of reactions. Describe variables affecting rate of reaction.	07 07
Q.2	(a) (b)	Explain point wise various definition of reaction rate. Give Introduction on thermodynamics and chemical kinetics. OR	07 07
	(b)	Differentiate: Single & Multiple reactions.	07
Q.3	(a) (b)	Distinguish the terms elementary & non – elementary reactions Temperature dependency from Arrhenius's law. Explain OR	. 07
Q.3	(a) (b)	Discuss temperature dependency from thermodymics. Give explanation on temperature dependency from collision the	eory. 07
Q.4	(a) (b)	Short note. Batch Reactor. With neat sketch describe plug flow reactor. OR	07 07
Q.4	(a) (b)	Define. Space time, Space velocity, Rate constant. Give your view about design of reactor.	07 07
Q.5	(a) (b)	Explain experimental methods for F – curve and C – Curve. Mixed flow reactor. Short note.	07 07
Q.5	(a)	OR Explain time distribution of fluid in vessels for non ideal flow.	07
~	(b)	Write a note on age distribution of fluid leaving a vessel for nor	
