

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma Engineering – SEMESTER – I • EXAMINATION – SUMMER • 2014

Subject Code: 3311703

Date: 21-06-2014

Subject Name: Principles of Chemical Engineering

Time: 02:30 pm to 05:00 pm

Total Marks: 70

Instructions:

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is considered to be Authentic.

Q.1	(a) What is the need of the unit operation in Instrumentation? Define it.	07
	(b) Describe any one operation of the following; Drying, Blending, Conveying	07
Q.2	(a) State the importance of unit process.	07
	(b) Describe any one of the following with application. Reforming, Polymerization, Alkylation	07
	OR	
	(b) State the second law of thermodynamics and list applications.	07
Q.3	(a) Describe any one of the following with application. Isomerisation, absorption, Adsorption	07
	(b) Explain basic instrumentation for Tube type Heat Exchanger.	07
	OR	
Q.3	(a) How does an air conditioning system function? Explain.	07
	(b) Describe an Exothermic Heat Transfer Reaction.	07
Q.4	(a) Classify pumps and list them.	07
	(b) Classify compressors and list them.	07
	OR	
Q. 4	(a) Describe bucket type elevator as conveyor.	07
	(b) How does reciprocating compressor work?	07
Q.5	(a) Describe Redox Reactions.	07
	(b) Describe any one type of electrochemical cell.	07
	OR	
Q.5	(a) List types of batteries.	07
	(b) How does potentiometric titration function? Explain	07
