Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI • EXAMINATION – WINTER • 2014

Subject Code:161701 **Date: 26-11-2014**

Subject Name: Instrumentation System

Time:02:30 pm - 05:00 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)**	List down different criteria for Instrument Air System. Draw & explain large air instrumentation system.	**07**
	(b)	Compare Pneumatic & Electronic system with example.	**07**
Q.2	**(a)**	Draw ISA symbols for following (any seven), (1) Butterfly valve (2) Electric Line (3) Water cooled condenser (4) Damper (5) Pressure relief valve (6) Capillary tube (7) Variable area flow indicator (8) Safety valve	**07**
	(b)	Give engineering design criteria for control panels.	**07**
		OR	
	(b)	Explain in detail classification as per national electric code.	**07**
Q.3	**(a)**	Give classification of dryers & explain desiccant dryers in detail.	**07**
	(b)	Explain installation procedure of control valve.	**07**
		OR	
Q.3	**(a)**	Explain different type of compressor used in instrument air system.	**07**
	(b)	Explain typical installation procedure of Rotameter.	**07**
Q.4	**(a)**	Give various methods for selecting flow measurement.	**07**
	(b)	Explain Instrument Index & loop wiring diagram.	**07**
		OR	
Q.4	**(a)**	Explain selecting measurement method for pressure instrument.	**07**
	(b)	Explain role of Project manager & equipment engineer in detail.	**07**
Q.5	**(a)**	Give the check list for good installation of temperature transmitter.	**07**
	(b)	Explain electrical power system for control room.	**07**
		OR	
Q.5	**(a)**	Give the classification of control panels. Also compare them.	**07**
	(b)	Explain mechanical flow sheet. Also draw & explain mechanical flow sheet for flow control system.	**07**

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