Seat No.: _____ Enrolment No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING – SEMESTER VI • EXAMINATION – WINTER 2015

Subject Code: 361701 **Date: 19- 12-2015**

Subject Name: Applied Instrumentation

Time: 02:30 PM TO 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.**
4. **Each question carry equal marks (14 marks)**

Q.1	(a)	Why only D.M water can be used in boiler? Explain various stages of D.M. water treatment plant with neat sketch.	07
	(b)	Which are the factors affecting selection of Pressure instruments?	07
Q.2	(a)	What is the importance of plant interlocks? Explain it with an example.	07
	(b)	Why a process industry needs Water Treatment Plant? Explain drawing a water treatment over view diagram.	07
		OR	
	(b)	Explain sand filter control system with neat sketch.	07
Q.3	(a)	What is the major difference between feed forward & feedback control scheme? Explain feed forward control scheme.	
	(b)	Explain the Sizing Criteria for an Instrument Air System drawing a schematic diagram for large capacity instrument air need.	07
		OR	
Q.3	(a)	Explain split range control scheme.	07
	(b)	Why drying is needed for instrument air & explain heated dryer.	07
Q.4	(a)	Give check list for good installation practice.	07
	(b)	Explain check out procedure for control valve.	07
		OR	
Q.4	(a)	Describe the typical check out procedure for the Temperature transmitter.	07
	(b)	Explain factors affecting selection of rotameter.	07
		OR	
Q.5	(a)	Explain the factors affecting selection of temperature Instruments.	07
	(b)	Explain an air supply distribution system with diagram.	07
		OR	
Q.5	(a)	Which are the factors affecting the selection of Flow instruments.	07
	(b)	State the types of maintenance & compare any two of them.	07

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