Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V (NEW) - EXAMINATION – SUMMER 2017

Subject Code:2151704 **Date: 27/04/2017**

Subject Name: CONTROL SYSTEM COMPONENTS

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.**

			MARKS
Q.1		**Short Questions**	**14**
	1	One bar =_____psi	
	2	Symbol of hand actuated electric switch 97 is._____	
	3	Symbol of flow sight glass is_____	
	4	Symbol of chemical seal is _____	
	5	Symbol of pilot light.	
	6	Symbol of two way valve fail to open is _____	
	7	Symbol of level indicator no 126 is_____	
	8	Symbol of pressure switch is_____	
	9	Symbol of flow switch is _____	
	10	List out disadvantages of the 2 wire transmitter system	
	11	Define purging.	
	12	Define calibration of valve.	
	13	Symbol of unidirectional pump is _____	
	14	Symbol of bidirectional pump is _____	
Q.2	**(a)**	Discuss instrument power requirements in brief.	**03**
	(b)	Explain control room lighting in detail.	**04**
	(c)	Discuss different control panel types.	**07**
		OR	
	(c)	Discuss bid specifications in detail.	**07**
Q.3	**(a)**	Explain compressor cooling in brief.	**03**
	(b)	Discuss panel piping and tubing.	**04**
	(c)	Explain positive displacement compressors in detail.	**07**
		OR	
Q.3	**(a)**	Explain compressor control in detail.	**03**
	(b)	Discuss graphic displays in brief.	**04**
	(c)	Discuss control room air supply system in detail.	**07**
Q.4	**(a)**	Discuss current to voltage converter.	**03**
	(b)	Define valve rangeability and valve capacity.	**04**
	(c)	Discuss glob and Diaphragm valves.	**07**
		OR	
Q.4	**(a)**	Discuss voltage to current converter.	**03**
	(b)	Explain frequency to voltage converter.	**04**
	(c)	Discuss butterfly and ball valves.	**07**
Q.5	**(a)**	Discuss use of microprocessors in annunciators.	**03**
	(b)	Explain smart transmitter.	**04**
	(c)	Explain control valve testing procedure in detail.	**07**
		OR	
Q.5	**(a)**	Discuss rapture discs.	**03**
	(b)	Explain intrinsic safe instruments.	**04**
	(c)	List out and discuss control valve accessories.	**07**

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