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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI • EXAMINATION - SUMMER 2013

·		Code: 161703 Date: 28-05-2013	
	e: 10	Name: Control System Components 0.30 am - 01.00 pm Total Marks: 70	
THIS CT	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	Explain backlash in gears, also explain techniques to reduce backlash. Explain the cam terminology with neat sketch.	07 07
Q.2	(a) (b)		07 07
	(b)	Which level switches are used for liquid level and solid material level detection? Explain the working of any level switch in detail with sketch.	07
Q.3	(a) (b)	Classify the different types of gears and explain them in brief. Explain the working of pneumatic and electronic transmitters. OR	07 07
Q.3	(a) (b)	Explain the criteria for the selection of control valves. Explain following valve terminology 1) Galling 2) Bonnet 3) Valve capacity 4) Trim 5) Yoke	07 07
Q.4	(a)	Explain the various applications of relays. What is the difference between	07
	(b)	relay and contactor? What is the significant of control valve flow characteristic? Explain selection of flow characteristics based on application with reason. OR	07
Q.4	(a) (b)		07 07
Q.5	(a) (b)	Classify the actuators of control valves and explain them in brief. Explain the differential pressure switch with all details OR	07 07
Q.5	(a)	~	07
	(b)	Explain construction and working of variable reluctance type stepper Motor.	07
