Seat No.: Enrolment No.	Seat No.:	Enrolment No.
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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI • EXAMINATION - WINTER • 2014

Subject Code: 163405 Subject Name: Mechatronics Time: 02:30 pm - 05:00 pm Instructions: Date: 03-12-12-12-12-12-12-12-12-12-12-12-12-12-			Date: 03-12-2014	
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Q.1	(a) (b)	Explain the open & closed loop control system with block diagrams. Explain LVDT with diagram.	07 07	
Q.2	(a) (b)	Name types of stepper motors. And explain any two with diagram. Explain belt and Chain drives.	07 07	
	(b)	OR Explain brush type DC motors with field coils and its types.	07	
Q.3	(a) (b)	Name different types of control modes and explain 2 step mode. Explain derivative control modes in detail with diagram. OR	07 07	
Q.3	(a) (b)	Explain Hydraulic mechanical system as system model. Explain PID control.	07 07	
Q.4	(a) (b)	Explain Different logic function used in PLC. Explain data handling in PLC.	07 07	
Q.4	(a) (b)	OR Explain Input/output processing in PLC. Explain Basic PLC structure in details with figure.		
Q.5	(a) (b)	Short note on Car engine management system. Explain Hard disk Drive system in details. OR	07 07	
Q.5	(a) (b)	Explain various stages in Mechatronics system design. Short note in Automatic Car Parking system.	07 07	
