

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (OLD) - EXAMINATION – SUMMER 2017

Subject Code: 161703

Date: 27/04/2017

Subject Name: Control System Components

Time: 10:30 AM to 01:00 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) With neat sketch explain Intelligent Transmitter. **07**
(b) Define Valve Capacity and Valve Rangeability. Explain both with examples. **07**
- Q.2** (a) Discuss Globe valve in detail. **07**
(b) Explain Angle valve. Show its typical application with diagram. **07**
OR
(b) Explain Needle valve. Show its typical application with diagram. **07**
- Q.3** (a) With neat sketch explain Pneumatic type actuator. **07**
(b) With neat sketch explain Electric type actuator. **07**
OR
- Q.3** (a) How can we Choose the Flow Characteristic of a valve? Explain in detail. **07**
(b) Explain and differentiate Single Seat and Double Seat valve constructions. **07**
- Q.4** (a) List out and discuss factors to be considered while selecting actuators. **07**
(b) Explain 3-D Cam. **07**
OR
- Q.4** (a) Explain valve Selection Guidelines in detail. **07**
(b) Explain Temperature switches and thermostats. **07**
- Q.5** (a) Derive Transfer Function of DC Servomotor. **07**
(b) Explain working and application of variable reluctance type stepper motor. **07**
OR
- Q.5** (a) Explain operation of Induction motor in detail. **07**
(b) List out type of Gears and discuss their application with neat diagram. **07**
