

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – SUMMER 2013****Subject Code: 161702****Date: 27-05-2013****Subject Name: Process Control****Time: 10.30 am - 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) List out and discuss different control objectives. **07**
(b) Discuss linearization and concept of linearity with an example. **07**

- Q.2** (a) Draw and explain process and instrumentation elements of a typical feedback loop. **07**
(b) Define controlled and manipulated variables and discuss checks to be made to select them. **07**

OR

- (b) Discuss different desired features of a feedback control algorithm. **07**

- Q.3** (a) How can we determine tuning constants that give good control performance? **07**
(b) Discuss Ziegler Nicholas method and its advantages. **07**

OR

- Q.3** (a) Discuss cascade control design criteria. **07**
(b) Explain implementation issues in cascade control. **07**

- Q.4** (a) Explain feed forward control with example. **07**
(b) Discuss application of ratio control. **07**

OR

- Q.4** (a) Discuss override control in detail. **07**
Q.4 (b) Explain selective control with example. **07**

- Q.5** (a) Explain PD control mode in detail. **07**
(b) Explain PI control mode in detail. **07**

OR

- Q.5** (a) Define proportional band, rate gain and dead time. **07**
(b) Discuss multi position control mode in detail. **07**
