

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-V • EXAMINATION – WINTER 2013

Subject Code: 151704**Date: 09-12-2013****Subject Name: Industrial Control System****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) Explain the feed forward control scheme with neat sketch . **07**
(b) Explain the cascade control scheme with neat sketch and application. **07**

- Q.2** (a) Explain the importance of PI diagram. **07**
(b) Explain flow characteristic of control valve with neat sketch. **07**

OR

- (b) Give classification of control valve and explain butterfly control valve with neat sketch. **07**

- Q.3** (a) Give difference between PLC, hardwired system and Computer. **07**
(b) Explain the important features of DCS. **07**

OR

- Q.3** (a) Explain electronic floating point controller with necessary sketch, error wave form, schematic and application. **07**
(b) Give the importance of DDC **07**

- Q.4** (a) Explain PI controller with necessary sketch, error wave form, schematic and application. **07**
(b) Give the closed loop response of PID controller. **07**

OR

- Q.4** (a) Explain PD controller with necessary sketch, error wave form, schematic and application. **07**
(b) Discuss the merits of closed loop control over open loop control. **07**

- Q.5** (a) Discuss the types and uses of mathematical modeling. **07**
(b) Give classification of controller with limitation of each one. **07**

OR

- Q.5** (a) Explain any one method of controller tuning. **07**
(b) Explain SCADA system in detail. **07**
