

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – WINTER • 2014****Subject Code:161701****Date: 26-11-2014****Subject Name: Instrumentation System****Time:02:30 pm - 05:00 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 down different criteria for Instrument Air System. Draw & explain large air instrumentation system. **07**
- (b)** Compare Pneumatic & Electronic system with example. **07**
- Q.2 (a)** Draw ISA symbols for following (any seven), **07**
- (1) Butterfly valve (2) Electric Line
(3) Water cooled condenser (4) Damper
(5) Pressure relief valve (6) Capillary tube
(7) Variable area flow indicator (8) Safety valve
- (b)** Give engineering design criteria for control panels. **07**
- OR**
- (b)** Explain in detail classification as per national electric code. **07**
- Q.3 (a)** Give classification of dryers & explain desiccant dryers in detail. **07**
- (b)** Explain installation procedure of control valve. **07**
- OR**
- Q.3 (a)** Explain different type of compressor used in instrument air system. **07**
- (b)** Explain typical installation procedure of Rotameter. **07**
- Q.4 (a)** Give various methods for selecting flow measurement. **07**
- (b)** Explain Instrument Index & loop wiring diagram. **07**
- OR**
- Q.4 (a)** Explain selecting measurement method for pressure instrument. **07**
- (b)** Explain role of Project manager & equipment engineer in detail. **07**
- Q.5 (a)** Give the check list for good installation of temperature transmitter. **07**
- (b)** Explain electrical power system for control room. **07**
- OR**
- Q.5 (a)** Give the classification of control panels. Also compare them. **07**
- (b)** Explain mechanical flow sheet. Also draw & explain mechanical flow sheet for flow control system. **07**
