Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER - VI EXAMINATION - WINTER 2015

Subject Code:161701 Date: 15/12/2015 Subject Name: Instrumentation system Time: 2:30pm to 5:00pm **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 0.1 Explain air supply system for instrumentation. 07 (a) Draw the standard symbols. 07 1. Hydraulic Line 5. Pressure relief valve 2. Level gauge 6. Fail to close valve 3. Rotameter 7. Magnetic flow meter 4. Rupture disk **Q.2** Describe the pneumatic loop wiring diagram in detail. 07 Give the classification of control panels. Also compare them. 07 Explain the plant start up procedure. **(b)** 07 0.3 (a) Give various methods for selecting flow measurement. 07 Explain which precaution to be taken to design control panel. 07 **(b)** OR Prepare the instrumentation specification sheet for pressure transmitter. 0.3 (a) 07 Explain any two communication system for control room with its features. 07 **(b)** What are responsibilities and duties of Instrumentation Engineer while plant is 0.4 07 (a) being commissioned? Describe the selection of measurement method for "pressure". **07 (b)** 0.4 Explain the various types of compressor used for instrument air supply. 07 (a) Explain desiccant type dryers. **(b)** 07 Q.5 Discuss electric safety and intrinsic safety. 07 (a) **(b)** Explain the check list for good installation practice. **07** Q.5 Classify hazardous area and material according to NEC. 07 (a) Discuss calibration methods used during construction phase of any big process 07 industry.
