

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – SUMMER 2013****Subject Code: 161701****Date: 24-05-2013****Subject Name: Instrumentation 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) What is Instrument Air System? Briefly explain the operation of Instrument Air Supply plant for any process industry. **07**

(b) Explain the plant start up procedure. **07**

Q.2 (a) Explain the check list for good installation practice. **07**

(b) Explain the operation of various dryers used in Instrument Air Supply. **07**

OR

(b) Explain various types of compressors used for Instrument Air Supply. **07**

Q.3 (a) Explain Electrical Power system used for control room. **07**

(b) Explain the layout of a control room with suitable diagram. **07**

OR

Q.3 (a) What is control panel? Explain various types of control panels in brief. **07**

(b) Explain selection of measurement method for Temperature. **07**

Q.4 (a) Explain documents to be produced as a part of Instrument Project Control. **07**

(b) Explain the installation procedure for control valve. **07**

OR

Q.4 (a) Explain the Electrical safety and Intrinsic safety. **07**

Q.4 (b) Explain the role of an Instrumentation Engineer in process industry. **07**

Q.5 (a) Explain the selection of measurement methods for pressure. **07**

(b) Explain communication system for control room. **07**

OR

Q.5 (a) Explain the following terms **07**

1) Dew Point 2) Absorption 3) Adsorption 4) Hook up diagram 5) Mechanical Flow sheet 6) Plant air 7) Air header

(b) Explain various symbols related to P&I diagram as per ISA. **07**
