

**GUJARAT TECHNOLOGICAL UNIVERSITY**
**BE - SEMESTER-VI(OLD) – EXAMINATION – SUMMER 2019**
**Subject Code:161701**
**Date:18/05/2019**
**Subject Name: Instrumentation System**
**Time:10:30 AM TO 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.

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|------------|-----|--|-----------|
| <b>Q.1</b> | (a) | Sketch loop wiring diagram and Explain it in detail.                 | <b>07</b> |
|            | (b) | Draw and Explain control room layout.                                | <b>07</b> |
| <b>Q.2</b> | (a) | Explain air supply system in detail.                                 | <b>07</b> |
|            | (b) | Explain electric safety and explain about hazardous area.            | <b>07</b> |
|            |     | <b>OR</b>  |           |
|            | (b) | Explain checklist for good installation practice.                    | <b>07</b> |
| <b>Q.3</b> | (a) | Explain different communication methods used in plant control room.  | <b>07</b> |
|            | (b) | Explain different types of control panel in detail.                  | <b>07</b> |
|            |     | <b>OR</b>  |           |
| <b>Q.3</b> | (a) | Explain various types of dryers and functions.                       | <b>07</b> |
|            | (b) | Explain plant startup procedure.                                     | <b>07</b> |
| <b>Q.4</b> | (a) | Write a short note on capacitive type level measurement.             | <b>07</b> |
|            | (b) | Give the details of Diaphragm operated control valve.                | <b>07</b> |
|            |     | <b>OR</b>  |           |
| <b>Q.4</b> | (a) | Explain typical control valve checkout procedure.                    | <b>07</b> |
|            | (b) | Prepare the specification sheet for pressure transmitter.            | <b>07</b> |
| <b>Q.5</b> | (a) | Explain role and responsibilities of project manager.                | <b>07</b> |
|            | (b) | Describe the selection of measurement method for flow.               | <b>07</b> |
|            |     | <b>OR</b>  |           |
| <b>Q.5</b> | (a) | Give the checklist for good installation of temperature transmitter. | <b>07</b> |
|            | (b) | Describe electrical power system for control room.                   | <b>07</b> |

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