

GUJARAT TECHNOLOGICAL UNIVERSITY**Diploma Engineering - SEMESTER-V • EXAMINATION – SUMMER 2014****Subject Code: 351701****Date: 23-05-2014****Subject Name: Electronic & Pneumatic Instrumentation****Time: 2:30 pm - 5:30 pm****Total Marks: 70****Instructions:**

- 1. Attempt all questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**
- 4. English version is considered to be Authentic.**

- | | | |
|-------------|---|-----------|
| Q.1 | (a) Classify the electronics instruments & list instruments in each sub category. | 07 |
| | (b) How does a C R O function? List the operating controls of it | 07 |
| Q.2 | (a) State the need for isolation. Explain any one in brief | 07 |
| | (b) How does a flapper nozzle system work? Explain | 07 |
| | OR | |
| | (b) Why pneumatic relay is used? Explain any one type of pneumatic relay | 07 |
| Q.3 | (a) Explain the working of an Electronic P+I+D controller with a diagram. | 07 |
| | (b) How does a pneumatic P+D controller work? Explain with diagram | 07 |
| | OR | |
| Q.3 | (a) Explain the working of a Pneumatic P+I+D controller with a diagram. | 07 |
| | (b) How does a electronic P+I controller work? Explain with diagram | 07 |
| Q.4 | (a) Explain with diagram Electronic Differential Pressure Transmitter. | 07 |
| | (b) Why is current transformer needed? Explain the working principle. | 07 |
| | OR | |
| Q. 4 | (a) Compare the LCD display with LED type display. | 07 |
| | (b) Why is potential transformer needed? Explain the working principle | 07 |
| Q.5 | (a) How does SMART instruments differ from normal one? Explain | 07 |
| | (b) Explain moment balance principle with a diagram. | 07 |
| | OR | |
| Q.5 | (a) Explain the Anderson bridge drawing its circuit diagram. | 07 |
| | (b) How is a controller aligned & tuned? | 07 |
