

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING - SEMESTER-V • EXAMINATION – SUMMER 2013

Subject Code: 351701**Date: 10-05-2013****Subject Name: Electronic & Pneumatic Instrumentation****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.
4. Each question carry equal marks (14 marks)
5. Draw the figure wherever required

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|-------------|--|-----------|
| Q.1 | (a) Classify the Instruments used in Process instrumentation & List . | 07 |
| | (b) Explain the working principle of CRO. | 07 |
| Q.2 | (a) How does SSG works ? Explain with block diagram | 07 |
| | (b) Where Wheatstone Bridge circuit is used in instrumentation ? Explain the Balanced condition of Wheatstone Bridge | 07 |
| | OR | |
| | (b) Where Max Well bridge circuit is used in instrumentation ? Explain the Balanced condition of Max Well Bridge . | 07 |
| Q.3 | (a) Where is Pneumatic Relay used ? Explain non bleed type of pneumatic relay in brief. | 07 |
| | (b) Listing application of Force balance explain in brief. | 07 |
| | OR | |
| Q.3 | (a) Listing application of Motion balance explain in brief . | 07 |
| | (b) How does pneumatic controller type P+I+D work ? Explain . | 07 |
| Q.4 | (a) Explain with schematic diagram the working of electronic type P+D controller. | 07 |
| | (b) Explain with schematic diagram the working of electronic differential transmitter . | 07 |
| | OR | |
| Q. 4 | (a) Stating the importance of Current Transformer explain the working principle. | 07 |
| | (b) Explain with schematic diagram the working of electronic type P+I controller | 07 |
| Q.5 | (a) State the need of Isolation in instruments explain any one type of isolation . | 07 |
| | (b) Explain with schematic diagram the working principle of I to P Converter . | 07 |
| | OR | |
| Q.5 | (a) Explain with schematic diagram the working principle of Integrator . | 07 |
| | (b) Explain with schematic diagram the working principle of P to I Converter . | 07 |
