| Sea | t No.: | Enrolment No | _ | |
|---|------------|---|----------|--|
| Sul | hiect | GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-IV(OLD) • EXAMINATION – WINTER 2016 Code:141702 Date:24/11/201 | 6 | |
| Subject Name:Institute Elective -1Transducers Time:02:30 PM to 05:00 PM Instructions: Total Marks: | | | | |
| 11150 | 1. 2. | Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. | | |
| Q.1 | (a) | Define the following terms: (1) Sensitivity (2) Precision (3) Drift (4) Backlash (5) Fidelity (6) Accuracy (7) Reproducibility | 07 | |
| | (b) | Describe with neat sketch the construction and working of LVDT with its advantages and disadvantages. Also list its applications. | 07 | |
| Q.2 | (a) (b) | Explain Bounded and Unbounded strain gauge in detail. Explain McLeod gauge in detail. | 07 07 | |
| | (b) | OR Explain Piezo-electric method of thickness measurement. | 07 | |
| Q.3 | (a) | What you mean by pressure? Define absolute pressure, gauge pressure and vacuum pressure. | 07 | |
| | (b) | Draw and explain ultrasonic level measurement technique. Also given its merits and demerits. | 07 | |
| 0.1 | | OR Line to the first term of t | 0= | |
| Q.3 | (a) (b) | List out various type of transmitters. Explain any one in brief. Describe any one torque measurement technique with diagram. | 07 07 | |
| Q.4 | (a) (b) | Draw and explain construction and working of Rotameter. List the various types of speed measuring transducers. Explain Eddy current type tachometer in detail. | 07 07 | |
| 0.4 | | OR | 0= | |
| Q.4 | (a) (b) | Explain electro-magnetic flow meter with neat sketch. Define the term pH. Explain construction and working of glass electrode for pH measurement. | 07 07 | |
| Q.5 | (a) (b) | Explain working principle of thermocouple with advantages. Write a note on Pressure switch also give its uses. | 07 07 | |
| Q.5 | (a) (b) | OR With neat diagram explain Optical Pyrometer. Explain any one method for viscosity measurement with its limitation and | 07 07 | |

benefits.