| Seat No.: | Enrolment No. |
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## **GUJARAT TECHNOLOGICAL UNIVERSITY**

ME – SEMESTER II (NEW) – • EXAMINATION – SUMMER 2016

| Subject Code: 2724406 Subject Name: SENSOR TECHNOLOGY Time: 10:30 am to 01:00 pm Instructions:  Total Mar |                |  | Date: 02/06/2016 |  |
|---|----------------|--|------------------|--|
|   |                | ks: 70   |                  |  |
| Inst  | 1.<br>2.<br>3. |  |                  |  |
| Q.1   | (a)<br>(b)     | Explain various sensor characteristics. Explain with example dynamic modeling of sensor elements.                    | 07<br>07         |  |
| Q.2   | (a)<br>(b)     | Write short note on bridge circuits. Write short note on batteries for low power sensors.  OR                        | 07<br>07         |  |
|   | <b>(b)</b>     | Write short note on sensing using Hall effect.   | 07               |  |
| Q.3   | (a)<br>(b)     | Write short note on sensing using Piezoelectric effect.  Explain Oscillators as an excitation circuits.  OR          | 07<br>07         |  |
| Q.3   | (a)<br>(b)     | Write short note on sensing using Capacitance. Write short note on direct digitization.                              | 07<br>07         |  |
| Q.4   | (a)<br>(b)     | What is occupancy and motion detector? Explain two motion detectors. Write short note on Silicon Micromachining.  OR | 07<br>07         |  |
| Q.4   | (a)<br>(b)     | Write short note on Potentiometric Sensors. Write short note on surfacing processing for sensors.                    | 07<br>07         |  |
| Q.5   | (a)<br>(b)     | Write short note on Accelerometers. Write short note on silicon as sensing material.  OR                             | 07<br>07         |  |
| Q.5   | (a)<br>(b)     | Write short note on pressure sensor. Write short note on optical glasses as sensing material.                        | 07<br>07         |  |

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