

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER- V(OLD) EXAMINATION – SUMMER 2019****Subject Code:151702****Date:31/05/2019****Subject Name: Sensors And Signal Conditioning****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain PMMC. **07**
(b) Describe various test signals with its waveforms and representation. **07**
- Q.2** (a) What is the role of passive transducer in electrical measurement system? **07**
(b) Explain the techniques of obtaining direct and indirect Frequency modulation. **07**
- OR**
- (b) Define following: (1) Accuracy and Precision (2) Resolution (3) Fidelity (4) Saturation (5) Calibration (6) Dead zone (7) Bandwidth **07**
- Q.3** (a) Explain LVDT. **07**
(b) Explain in detail Hot wire anemometer. **07**
- OR**
- Q.3** (a) Explain digital tachometer in detail. **07**
(b) Give Classification of transducers. **07**
- Q.4** (a) Discuss Wien bridge oscillator. **07**
(b) Give the difference between periodic and aperiodic signals **07**
- OR**
- Q.4** (a) Explain the function of CRT with neat diagram. **07**
(b) Draw and explain the function of Strip chart recorders. **07**
- Q.5** (a) What is pH? Explain different types of pH electrodes in detail. **07**
(b) Explain Op-amp based V to F converter with neat sketch. **07**
- OR**
- Q.5** (a) Explain Hall effect and suggest its application. **07**
(b) Explain piezoelectric pressure transducers. **07**
