

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – WINTER 2013****Subject Code: 161705****Date: 04-12-2013****Subject Name: Instrumentation Measurement-II****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 couette visco meter in detail. **07**
(b) Explain electronic length measurement in detail. **07**
- Q.2** (a) Explain capacitive strain gauge with neat sketch. **07**
(b) Explain bounded resistance strain gauge with neat sketch. **07**
- OR**
- (b) Explain mass spring seismic sensor with neat diagram. **07**
- Q.3** (a) Explain acceleration measurement in detail. **07**
(b) Explain measurement of force using piezoelectric transducer. **07**
- OR**
- Q.3** (a) Explain the measurement of gas density with neat sketch. **07**
(b) Explain paper chromatography and thin-layer chromatography. **07**
- Q.4** (a) Explain principle, working and application of mass spectrometer. **07**
(b) Explain principle, working and application of atomic absorption spectroscopy. **07**
- OR**
- Q.4** (a) Explain glass electrodes in detail. **07**
(b) Explain reference electrodes in detail. **07**
- Q.5** (a) Explain flame ionization detector in detail. **07**
(b) Explain paramagnetic type oxygen analyzer with neat sketch. **07**
- OR**
- Q.5** (a) Explain the scheme for measurement of dew point with neat sketch. **07**
(b) Explain conductivity and give the complete scheme for measurement of conductivity in process with neat sketch. **07**
