

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V • EXAMINATION – WINTER • 2014****Subject Code: 152402****Date: 28-11-2014****Subject Name: Electrical Measurement & Electronics Instrument****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.

- Q.1** (a) Explain about static and dynamic charact. Of instruments. **07**
(b) Explain about the classification of instruments. **07**
- Q.2** (a) Explain about measurement and measurement system. **07**
(b) Explain about measurement standards. **07**
- OR**
- (b) Derive dimensions for charge, currents and E.M.F. using permittivity as forth fundamental dimention. **07**
- Q.3** (a) Explain about DC-voltmeter. **07**
(b) Explain about electro-dynamic instruments. **07**
- OR**
- Q.3** (a) Give comparison of P.M.M.C. and M.I. Instruments. **07**
(b) Explain Q-Factor of inductor. Also, explain about D-factor of capacitor. **07**
- Q.4** (a) Explain about digital voltmeter. **07**
(b) Explain about digital multimeter. **07**
- OR**
- Q.4** (a) Explain about 1-PHASE Energy meter. **07**
(b) Explain the method of medium resistance measurement. **07**
- Q.5** (a) Explain any one method of capacitance measurement using bridge ckt. **07**
(b) Explain any one method of inductance measurement using bridge ckt. **07**
- OR**
- Q.5** (a) Explain about A/D conversion principle. **07**
(b) Explain about power measurements in 3-PHASE systems. **07**
