Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-IV (New) EXAMINATION - WINTER 2015

Subject Code:2141704 Date: 28/12/2015 **Subject Name: Measurements and Instruments** Time: 2:30pm to 5:00pm **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. (a) Explain PMMC meter in detail with neat diagram. **Q.1** 07 (b) Explain the block diagram of Oscilloscope. Also explain the function of 07 oscilloscope. **Q.2** Explain the Wheatstone bridge for calculation of unknown resistance. 07 (a) Which bridge is used to measure the lower value of resistance? Justify the **(b)** 07 statement. OR **(b)** Explain the bridge to find the value of unknown capacitance. 07 0.3 (a) Explain function generator and pulse generator. 07 **(b)** Explain sweep function generator in detail. 07 Explain the bridge to find the value of unknown inductor. 07 Q.3 (a) Explain the following terms (i) Transformers (ii) Capacitance (iii) Inductance. 07 **(b)** Define interference? Explain ground loop interference. 07 0.4 (a) Explain current transformers with applications. 07 **(b)** OR Explain Magnetometer in detail. **07 Q.4** (a) Explain capacitive interference, inductive interference and shielding. **(b)** 07 **Q.5** Explain Time measurements with proper diagram. 07 (a) Explain DVM and Digital Multimeter. 07 **Q.5** (a) Explain Potential transformers with application. 07 **(b)** Define Q- factor. Explain its importance. 07
