DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Semester Examination – Nov/Dec - 2018

Branch: Electrical Engg. **Sem.:-III**
Subject with Subject Code:- Measurement & Instrumentation (BTEEC304) **Marks:60**
Date:- 07-12-2018 **Time:- 3Hr.**

Instructions to the Students

1. Each question carries 12 marks.
*2. Attempt **any five** questions of the following.*
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly

Q1. a)Describe Direct & Indirect methods of Measurement 6M

b) Define the Terms: 1. Repeatability 2. Reproducibility 3. Accuracy 6M

Q2. a)Describe the construction, working of PMMC instrument 6M

b) Explain Instrument Transformer - CT & PT 6M

Q3. a) Explain working & application Q-Meter 6M

b) Classify & explain different methods of measuring Low, Medium & High resistances 6M

Q4. a) Coil of 300 MI Voltmeter has resistance 500 ohm & inductance 0.8 Henry. The Instrument read correctly at 50 Hz ac supply and takes 100mA at Full Scale deflection. Analyze the percentage error in the instrument reading when it is connected to 200v DC Supply. 6M

b) Draw & Explain the Block diagram of Digital Voltmeter 6M

Q5. a) With the help of neat diagram explain the operation of LVDT 6M

b) Explain Thermocouple & RTD with its applications 6M

Q6. a) Explain different types of Recorders 6M

b) Two wattmeter connected to measure the input to a balanced three phase circuit indicates 2000W & 500W respectively. Find the Power Factor of the circuit. 6M

i) When the both readings are positive

ii) When the latter readings is obtained after reversing the connections to the current coil of the first instrument.

OR

c) Draw & Explain the block diagram of Digital Storage Oscilloscope (DSO) 6M

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