Roll No. | | | | | | | | | | | | |

Total No. of Pages : 01

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M.Tech.(EE) (2013 Batch E-II) (Sem.–2)

# REAL TIME INSTRUMENTATION

Subject Code : MTEE-205C

M.Code : 71365

Time : 3 Hrs. Max. Marks : 100

**INSTRUCTIONS TO CANDIDATES :**

1. **Attempt any FIVE questions out of EIGHT questions.**
2. **Each question carries TWENTY marks.**

1. Classify different types of errors in measurement. The current passing through a resistor of $100 \pm 0.2\Omega$ is $2.00\ A \pm 1\%$. Using the relationship $P = I^2R$, calculate the limiting error (in % and in W) in the computed value of power dissipation.
2. What are different aspects of dynamic characteristics of an instrument?
3. Explain why signal converters are required in signal conditioning process. Discuss **any one** DAC in detail.
4. Define word 'telemetry'. What are different telemetry methods and associated errors?
5. Discuss in details about SCADA, its organization and structure.
6. Write a detailed note on instrumentation and conditioning of drive signals.
7. Explain real time control of power system digital relaying.
8. Write short notes on the following :
   a) Transducers and sensors
   b) Man machine interface

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**