Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 01

Total No. of Questions : 08

M.Tech.(EE) (2013 Batch E-II) (Sem.–2)
REAL TIME INSTRUMENTATION
Subject Code : MTEE-205C
Paper ID : [A2511]

Time : 3 Hrs.   Max. Marks : 100

INSTRUCTION TO CANDIDATES :
1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

Q1. Classify the different methods for classification of transducers with examples. Explain all static characteristics of a measurement system.

Q2. With the neat illustration discuss the architecture of SCADA, explain the functioning of various parts. Also discuss the various selection criteria that must be considered for selection of a suitable SCADA for specific process control.

Q3. Explain the signal conditioning with neat diagram. Describe in detail about pulse width modulation (PWM) and pulse code modulation telemetry (PCM).

Q4. a) Describe the different methods of data transmission. Explain the block diagram of general telemetry system.

   b) Explain the hierarchical and decentralised control schemes.

Q5. Explain the different methods of digital to analog converters (DAC) in detail with neat sketch.

Q6. a) Discuss the energy management system in detail.

   b) Describe the power system digital relaying with neat sketch.

Q7. a) Discuss the energy management system for AGC.

   b) Explain the transmission of digital signal with neat diagram.

Q8. Write short notes on :

   a) Role of instrumentation in monitoring.

   b) Power plant instrumentation.