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Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech.(EE) (2012 Onwards E-I)**  
**(Sem.-6)**  
**INSTRUMENTATION IN POWER SYSTEM**  
**Subject Code : BTEE-605C**  
**M.Code : 71154**

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A****1. Answer briefly :**

- a. What do you mean by reactive power? Explain.
- b. What do you mean by transient response? Explain.
- c. What is digital modulation? Explain.
- d. Why instrumentation in power system is required? Explain.
- e. List the advantages of pulse modulation.
- f. Compare AM and FM.
- g. Why error detection and correction is required? Explain.
- h. What do you mean by signal formation? Explain.
- i. Explain the significance of control centre in SCADA.
- j. List the various errors that occur in telemetry system.

### SECTION-B

2. Discuss the measurement of electrical quantities in power system.
3. Explain the working of a AM transmitter.
4. Discuss the concept of remote control and remote signalling.
5. Explain the function of SCADA system. Also discuss the significance of RTU.
6. Discuss the applications of SCADA system to Indian power systems.

### SECTION-C

7. Explain in detail the instrumentation used in hydroelectric power plant and nuclear power plant instrumentation.
8. Discuss the significance of telemetry. Explain in detail the digital telemetry methods.
9. Write notes on the following :
  - a. Communication between control centres in SCADA
  - b. Instrument transformer

**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.**