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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(EE/Electrical & Electronics) (2011 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. Define accuracy and precision.
- b. What is linearity of a transducer?
- c. What are the application of SCADA system?
- d. What do you mean by the term 'shielding'?
- e. What is the function of sample and hold circuit?
- f. What are the properties of modulated signals?
- g. What is meant by Total Harmonic distortion?
- h. Differentiate between electrical and mechanical transducers.
- i. What is the purpose of "multiplexer" in a telemetry system?
- j. What are the components of SCADA?



SECTION-B

2. Explain SCADA architecture in detail. State advantages and disadvantages of SCADA systems.
3. What are the different types of telemetering system? Explain the land-line telemetering system and describe its advantages.
4. What is the role of instrumentation in hydro power plant? Explain detail with proper diagram.
5. What is a power factor? Explain the method of measurement of power factor. Also, explain the active and reactive powers in a plant.
6. Explain the circuit of multimeter for measurement of a.c. voltages.

SECTION-C

7. Explain the working principle of single phase induction type energy meter. Also discuss various methods of frequency and phase angle measurements with neat diagrams.
8. Explain the working of capacitive type potential transformer with their transient behaviour.
9. Explain the effect of following on Current transformers
 - a. Change of primary winding current
 - b. Change of secondary circuit burden
 - c. Change of frequency

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.