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Total No. of Pages : 02

Total No. of Questions : 18

**B.Tech. (EE) / (Electrical & Electronics) (2012 Onwards E-I)**  
**(Sem.-6)**

**INSTRUMENTATION IN POWER SYSTEM**

**Subject Code : BTEE-605C**

**M.Code : 71154**

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS 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**

**Answer briefly :**

1. Differentiate between active and reactive power.
2. Discuss the significance of instrumentation in power system.
3. What is modulation index? Discuss.
4. Compare PM and AM.
5. Write down the advantages of digital transmission.
6. Write down the errors that occur in telemetry system.
7. Discuss the principle of energy meters.
8. What do you mean by remote signaling? Explain.
9. Explain the significance of transient response.
10. What is the need of telemetry? Explain.

### SECTION-B

11. Explain (in detail) the measurement of any of the electrical quantities in power system.
12. Explain (in detail) the working of a FM transmitter.
13. Discuss the concept of signal formation, conversion and transmission.
14. Explain the function of SCADA system and remote terminal unit in detail.
15. Discuss in detail the instrumentation used in thermal power plant.

### SECTION-C

16. Explain in detail the applications of SCADA system to Indian power systems.
17. Explain the pulse and digital telemetry methods in detail.
18. Discuss the following :
  - a. Instrument transformer
  - b. Pulse Modulation

**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.**