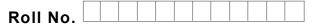


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M.Tech.(EE/Pow Engg.) (E-II) (Sem.-2) APPLIED INSTRUMENTATION Subject Code : ELE-513/PEE-517 Paper ID : [E0495]

Time: 3 Hrs.

Max. Marks: 100

INSTRUCTION TO CANDIDATES :

- 1. Attempt any FIVE questions out of EIGHT questions.
- 2. Each question carries TWENTY marks.
- 1. Describe (in detail) the criteria for selection of transducers for a particular application. Also discuss the static and dynamic response of transducer system.
- 2. Describe different methods used for measurement of thermal conductivity and torque.
- 3. i) Describe (any two) electrical methods for measurement of thickness. Describe their advantages and disadvantages.

ii) Describe any two methods used for measurement of moisture.

- 4. What is multiplexing? Explain time division and frequency division multiplexing in detail.
- 5. Describe the principle and working of Nixie tubes, LEDs and LCDs. Also discuss the advantages of each.
- 6. Explain the following
 - i) Various telemetry systems.
 - ii) Analog and digital encoders.
- 7. Explain (in detail) the working of supervisory control and data acquisition system (SCADA). Explain each and every block in detail.
- 8. What do you mean by noise? Explain electrical noise in control signals and its remedial measures in detail.