Roll No. | | | | | | | | | | | | |

Total No. of Pages : 01

Total No. of Questions : 08

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.