

PCE6I101 PROCESS INSTRUMENTATION

MODULE I

Elements of measuring systems and their functions. Signal transmission. Transmitters electronic pneumatic etc.

MODULE II

Temperature Measurement : Temperature scales Mercury in glass thermometer, Bimetallic thermometer, pressure spring thermometer, Thermoelectric temperature measurements, thermocouples, thermal well and potentiometers, Resistance thermometer and pyrometers.

MODULE III

Level measurements of open and pressure vessels measurement of interface level

MODULE IV

Density measurements by displacement meter, hydrometer and densitometer. Orifice, Venturi, Pitot, and Rota-meters flow measurement of open channels. Instrumentation to flow plan symbols and chemical sensors

REFERENCE BOOKS:

- ❖ D. P. Eclaman, Industrial Instrumentation, Wiley Estern, 1989.
- ❖ J. P. Bentley, Principles of Measurement Systems, 2nd ed. Longman London, 1988.
- ❖ J. W. Dally, W. F. Riley and K. G. McConnell, Instrumentation , Engineering Measurements, John Wiley and Sons, Singapore, 1984.
- ❖ C. S. Rangan, G. R. Sarma and V. S. V. Mani, Instrumentation Devices and systems, Tata McGraw Hill, New Delhi, 1983
- ❖ B. C. Nakra and K. K. Chaudhary, Instrumentation Measurement and Analysis, Tat McGraw Hill, New Delhi, 1985.