

Dear Students,

Hope you all are doing well.

Kindly prepare for the course as per the details given below.

Here I have attached the syllabus (unit vis).

Process Instrumentation

Unit I: Introduction: Measuring instruments and their function, elements of measurement, important characteristics of industrial measurement. Classification of Instruments: Recording and measuring types.

Unit II & III: Temperature measurement: Classification of thermometers, and pyrometers, response of thermometers, protecting wells. Fluid filled expansion thermometers. Thermocouples: Resistance thermometers. Radiation and optical pyrometers.

Unit IV & V: Pressure and vacuum measurement: Classification. Manometers- Inverted well pressure gauges. Bourdon tube pressure gauges, diagram of pressure gauges. Special measuring devices: Pressure and vacuum, McLeod gauge. Thermal conductivity and ionization gauges.

Unit VI: Head and area flow meters-flow measuring devices Liquid level measuring devices. Visual indicators float motivation, liquid level instruments. Pressure differential type level gauge. Electrical contact type liquid level indicators.

Book 1: Measurement Systems, Application & Design by Ernest. O. Doebelin

Book 2: Fundamentals of Industrial Instrumentation and Process Control by William C Dunn

Unit I: - Book 1 (Chapter 2& 3)

Unit II&III: - Book 1 (Chapter 8; 8.1-8.7)

Unit IV &V: - Book 1 (Chapter 6; 6.1- 6.9)

Unit VI: - Book 1 (Chapter 7; 7.1- 7.3)& Book 2 (Chapter 6 & 7)

NPTEL Link: <https://nptel.ac.in/courses/103105130/>

Hope to see you all soon.

Feel free to ask for any doubt via email naaz_1709@yahoo.in.

Good Luck....

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(Process Instrumentation)