

Question Bank (I scheme)

Name of Course: Chemical Process Instrumentation & Control (CPI)

Subject code: 22407

Semester : IV

Programme: Chemical

Unit test I

Unit 1 : Concept of Measurement(6marks)

TWO marks question

1. Define direct measurement. Give one eg
2. Define sensitivity and static error.
3. Define speed of response
4. Define static characteristics and dynamic characteristics

FOUR marks question

5. Explain the functional elements of an instrument system.
6. Define lag and dynamic error.

Unit2: Temperature Measurement(12marks)

TWO marks question

7. Define Seebeck effect and Peltier effect
8. Give the principle of bimetallic thermometer.
9. Draw the diagram of RTD and mark the parts.
10. State the principle of radiation pyrometer

FOUR marks question

11. Explain the working of spiral bimetallic thermometer
12. Draw different types of thermistor.
13. Give the ice point and steam point in different temperature scales.
14. State the advantages of pyrometer over other temperature measuring devices
15. Explain the construction of thermocouple

Unit 3:Pressure Measurement (12marks)

TWO marks question

16. State the principle of strain gauge.
17. Convert 500mm of Hg into Pa, Psi, Kg/cm² .
18. Draw the diagram of a LVDT and label it.

FOUR marks question

19. Explain the working of metallic diaphragm gauge
20. State the application of MC Leod gauge.
21. Explain the working of dead weight tester
22. Explain the construction of bellows

Unit 4:Flow and Level Measurement (5marks)

TWO marks question

23. State the principle of variable area meter
24. Give the application of Piston type flow meter
25. Draw the diagram of electromagnetic flow meter and mark the parts