

# Question Bank (I-Scheme)

Name of course: Industrial Measurements

Unit Test: I

Subject code: 22420 (IME)

Semester: IV

Program: EE

## Chapter 1: Applications of Transducers (CO1)

### 2 Marks

1. Define active and passive transducers.
2. Write one example of each type: Active transducer, Primary transducer
3. Write one example of each type: Electrical transducer & Digital transducer.
4. Write one example of each type: Passive transducer & Mechanical transducer.
5. List selection criteria of transducer (any four points).
6. Define Gauge Factor.
7. Write two disadvantages of capacitive transducer.

### 4 Marks

8. Draw and explain block diagram of instrumentation system.
9. Classify the transducer on basis of working and applications.
10. State the selection criteria for transducers
11. Draw and Explain LVDT with constructional diagram.
12. What is residual voltage, explain with neat diagram.
13. What is piezo electric effect? Name two piezo electric materials.

## Chapter 2: Pressure Measurement (CO2)

### 2Marks

14. List Pressure measuring devices.
15. State the principle of U- tube manometer
16. Define pressure and write its unit.

### 4Marks

17. Explain the working of U tube Manometer with neat sketch
18. State the advantages and disadvantages of bellows.
19. Write the application of mechanical transducer

20. Draw the following and write one application of each:  
(i) Well type manometer      (ii) Bellows.
21. Draw the diagram of Bourdon Tube pressure gauge.
22. Explain the working of Diaphragm type pressure transducers.
23. Draw constructional details of C-types Bourdon tube and explain its working.
24. Explain the process of calibration of pressure gauge by Dead Weight Tester.
25. Explain different types of Pressure with its unit.

### **Chapter 3: Flow Measurement (CO3)**

#### **2Marks**

26. List different types of variable head flow meter.
27. List Flow measuring devices
28. Write equation of Reynolds number with meaning of each term
29. Why Rotameter is called variable area flowmeter?
30. State use of Rotameter
31. State working principle of pitot tube

#### **4 Marks**

32. Compare orifice plate with venturi tube with reference to:  
(i) Working principle  
(ii) Construction  
(iii) Cost  
(iv) Pressure loss.
33. Explain the working of rotameter with neat diagram.