

**1st Sem. / Instrumentation & Control Engg.**  
**Subject : Fundamentals of Instrumentation Engineering**

Time : 3 Hrs. M.M. : 60

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 LCD stands for

- a) Liquid Crystal display
- b) Level crystal display
- c) Liquid crystalline display
- d) None

Q.2 Which of the following undesirable static characteristics?

- a) Sensitivity
- b) Accuracy
- c) Drift
- d) None

Q.3 Which of the following is passive transducer?

- a) Piezo-electric
- b) LVDT
- c) Thermocouple
- d) None

Q.4 A null type of instrument is compared to deflection type of instrument

- a) A high accuracy
- b) A lower sensitivity
- c) A faster response
- d) None

Q.5 Random error in the instrument occurs due to

- a) Human
- b) Environmental
- c) Unknown cause
- d) Both (a) & (b)

Q.6 Which of the following is pressure sensor?

- a) LVDT
- b) Bellows
- c) Thermocouple
- d) None

### **SECTION-B**

**Note:** Objective/ Completion type questions. All questions are compulsory.  $(6 \times 1 = 6)$

Q.7 Write two name of sensor.

Q.8 What is transducer?

Q.9 What is error and relative error?

Q.10 What is calibration?

Q.11 Write four statics characteristics name.

Q.12 What is sensor?

### **SECTION-C**

**Note:** Short answer type questions. Attempt any eight questions out of ten questions.  $(8 \times 4 = 32)$

Q.13 Explain the difference between drift and dead time.

Q.14 What is LCD?

Q.15 What is normal distribution of error?

Q.16 Explain the characteristics of LED.

Q.17 What is the Gross error?

Q.18 What is the difference between sensor and transducer?

Q.19 Explain 7 segment display.

Q.20 What is deflecting torque?

Q.21 Explain the difference between analog and digital.

Q.22 Explain Strip chart recorder.

### **SECTION-D**

**Note:** Long answer type questions. Attempt any two questions out of three questions.  $(2 \times 8 = 16)$

Q.23 Explain the dynamic characteristics of instrument.

Q.24 Explain desirable and undesirable statics characteristics of instrument.

Q.25 Explain the different types of source of error in measurement system.