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221516

**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.