

## **SECTION-D**

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain the dynamic characteristics of instruments.

Q.24 Write notes on any two of the following:

- a) Segmental Displays.
- b) Strip chart recorder
- c) Fluorescent displays

Q.25 Explain and draw building blocks of generalized measurement system.

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**1st Sem / Instrumentation & Control Engg.**

**Subject : Fundamental of Instrumentation Engineering**

Time : 3 Hrs.

M.M. : 60

## **SECTION-A**

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

Q.1 What is the sensitivity of a sensor if the difference between two alternative output observations is 0.6 and difference between two alternative input observations is 0.2?

- a) 3
- b) 0.6
- c) 0.2
- d) 2

Q.2 Which of the following is caused by careless handling?

- a) Systematic error
- b) Gross error
- c) Random error
- d) None of the above

Q.3 Closeness of measured value to true value is \_\_\_\_\_

- a) Accuracy
- b) Precision
- c) Correction
- d) Uncertainty

Q.4 Which transducer is known as ‘self-generating transducer’?

- a) Active transducer
- b) Passive transducer
- c) Secondary transducer
- d) Analog transducer

Q.5 In a measuring system quantity under measurement is termed as \_\_\_\_\_

- a) Measurand
- b) Controllers
- c) Sensors
- d) Indicators

Q.6 A measuring system consists of

- a) Sensors
- b) Variable conversion elements
- c) Signal processing elements
- d) All of these

### SECTION-B

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Dot matrices is a recording device. (True/False)

Q.8 The ratio of maximum displacement deviation to full scale deviation of the instrument is called \_\_\_\_\_.

Q.9 Accuracy and precision are dependent on each other. (True/False)

Q.10 Instrumental error are caused by \_\_\_\_\_.

Q.11 Write two examples of absolute instruments.

Q.12 Error or measurement is the difference between \_\_\_\_\_ and measured value

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Explain the difference between precision and accuracy.

Q.14 What is LED.

Q.15 What is relative limiting error?

Q.16 Explain the characteristics of LCD.

Q.17 What is the systematic error.

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

Q.19 Explain dot matrices.

Q.20 What is Controlling torque?

Q.21 Give 3 examples of each indicating and recording instruments.

Q.22 Explain Magnetic tape recorder with diagram.