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Total No. of Pages: 01
Total No. of Questions: 09**B.Tech(AE) (Sem.-5th)**
MEASUREMENTS AND INSTRUMENTATION

Subject Code: BTAE-505

Paper ID: [A2065]

Time: 3 Hrs.

Max. Marks: 60

INSTRUCTIONS TO CANDIDATE:*(i) Section –A, is Compulsory.**(ii) Attempt any four questions from Section-B.**(iii) Attempt any two questions from Section-C.***SECTION –A**

1.

- a) Define the term instrumentation.
- b) What do you understand by variance?
- c) What is linearity?
- d) What is hysteresis?
- e) How can the systematic errors be located?
- f) What are random errors?
- g) How are transducers classified?
- h) How does a differential manometer differs from a simple manometer?
- i) What are thermistors?
- j) What is a hydraulic load cell?

2x10=20**SECTION – B**

2. Differentiate between threshold and resolution.
3. Discuss the dynamics for sinusoidal input to a first order system.
4. Explain median, arithmetic mean and standard deviation.
5. Discuss the applications of piezoelectric transducers for measurement of pressure.
6. Discuss the principle of working of pneumatic load cell.

5x4=20**SECTION – C**

7. Explain the working of rotameter with the help of a sketch.
8. Discuss the working of radiation pyrometer.
9. Write a note on automotive sensors and actuators.

2x10=20

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