

SECTION-C

Note: Long answer type questions. Attempt any three questions. 3x10=30

- Q.3 Draw the block diagram of generalized measurement system and justify the necessity of each block.
- Q.4 What is LVDT. Explain the working of an LVDT. Give its advantages.
- Q.5 Explain the working of a thermometer. Give construction of different types and discuss its application in measurement.
- Q.6 Briefly describe different methods of speed measurement.
- Q.7 Write short notes (on any two)
- a) Bourdon pressure gauge
 - b) Ultrasonic flow meter
 - c) Temperature recorders.
 - d) Display devices.

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Roll No.

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5th Sem. / Power Eltx.

Subject : Instrumentation

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

- Q.1
- a) Define measurement.
 - b) Define transducer.
 - c) Expand LDVT.
 - d) Define torque.
 - e) What is a passive transducer.
 - f) Define gauge factor.
 - g) What is the function of a strain gauge.
 - h) What is a thermocouple?
 - i) What is piezo-electric effect?

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- j) What is a flow meter?
- k) Define Humidity.
- l) Define strain.
- m) Mention a few display devices.
- n) What is a pyrometer.
- o) Mention drawbacks of thermocouples.
- p) What is signal conditioning?
- q) What is the importance of pH level.
- r) Write one advantage of indirect method of measurement.

SECTION-B

Note: Short answer type questions. Attempt any ten parts
10x4=40

- Q.2
- i) What are the limitations of measuring systems.
 - ii) What is the importance of signal conditioning unit in measurement system.
 - iii) Write the principle of capacitive transducer.

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- iv) Describe about potentiometric transducer.
- v) Write any method for displacement measurement. Explain.
- vi) Suggest and explain any method for high temperature measurement.
- vii) Define and explain gauge factor.
- viii) What is load cell?
- ix) Enumerate various types of pressure sensing devices.
- x) Explain speed measurement method.
- xi) What is humidity? Discuss various types of humidity.
- xii) Explain basic principle of diaphragm.
- xiii) Explain bimetallic thermometer.
- xiv) What are the advantages of telemetry.
- xv) Name flow sensors for measurement of flow rate.

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