

SECTION-C

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

- Q.3 Explain V to I convertor in detail.
- Q.4 Discuss transducer based upon hall-effect with diagram.
- Q.5 Explain construction & working principle used in LV DT with diagram.
- Q.6 What is potentiometer. Discuss its classification with diagram.
- Q.7 Write short note on any two :-
- a) Load cell
 - b) Induction Potentiometer
 - c) Single shaft encode.

No. of Printed Pages : 4

Roll No.

121542/0131542

4th Sem. / I.C, E.I

Subject : Transducer And Signal Conditioning

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

- Q.1
- a) Load cells
 - b) Classification of transducer.
 - c) Thermistor is used for measurement of _____.
 - d) RUDT stands for
 - e) Mention any two peizo-electric material.
 - f) Differentiate between LDR and LED
 - g) RTD stands for _____
 - h) Strain gauge.

(180)

(4)

121542/0131542

(1)

121542/0131542

- i) Analog signal conditioning.
- j) Inductor potentiometer.
- k) Photo resistors
- l) Carbon microphone.
- m) Potentiometer
- n) thermistor
- o) Impedance matching.
- p) Transducer.
- q) Filtering
- r) PWM.

SECTION-B

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

- Q.2
- i) Discuss transducers & their characteristics.
 - ii) Explain carbon microphone with diagram.

(2) 121542/0131542

- iii) What is electromagnetic pick-up.
- iv) Discuss about capacitance pick-ups.
- v) Explain application of ultrasonic transducer.
- vi) Discuss different optical transducers.
- vii) Discuss analog signal conditioning.
- viii) Mention advantages and disadvantages of accelerometer.
- ix) What is hot wire anemometer.
- x) Mention advantages & disadvantages of synchronous transmitter and receiver.
- xi) Explain seismic pick-up
- xii) Discuss tachogenerator with diagram.
- xiii) Discuss filtering & impedance matching in analog signal conditioning.
- xiv) Differentiate between RTD and thermistor.
- xv) Explain selection criteria for transducers.

(3) 121542/0131542