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RAN-2003000205020095

T. Y. B. Sc. (Sem. - V) Examination March - 2023

Electronics : Paper - X

सूचना : / Instructions

(1) नीचे दृशविले निशानीवाणी विगतो उत्तरवही पर अवश्य लखवी.
Fill up strictly the details of signs on your answer book

Name of the Examination:
☛

Name of the Subject :
☛

Subject Code No.:

Seat No.:

- (2) Q. 1 is compulsory.
(3) Figures to the right indicate full marks.

Q. 1 Answer in brief. 8

- A) State three methods of temperature measurement.
B) State the devices to sense/measure force.
C) State Advantages of Electrical Transducers.
D) State the bases on which the transducers are classified.

Q. 2 14

- A) Derive the strain gauge and derive express for gauge factor.
B) What do you understand by Analog and Digital Transducers? Explain strain gauge as an analog transducer.

OR

Q. 2 14

- A) Explain General data acquisition system with block diagram.
B) State various technique of D-to-A converter. Explain any one technique for D-to-A converter.

- Q.3** **14**
- A) What do you understand by active and passive transducers? Explain the potentiometer as linear displacement measurement transducer.
 - B) State advantages and disadvantages of LVDT. Explain the principle of operation of the inductance transducers work.

OR

- Q.3** **14**
- A) Explain factors influencing the choice of Transducers for a specific application.
 - B) State the disadvantages of Capacitive Transducers. Explain the importance of differential arrangement for the capacitive displacement transducers.

- Q.4** **Write Note on. (Any TWO)** **14**
- A) Pneumatic load cell.
 - B) Resistance - Temperature Detectors (RTDs).
 - C) Bimetallic Thermometer.
 - D) Semiconductor Resistance Sensors (Thermistors).
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