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DEC-07

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Paper ID [EC203]

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B.Tech. (Sem. - 3rd)

ELECTRONIC MEASUREMENTS AND INSTRUMENTATION (EC- 203)

Time : 03 Hours

Maximum Marks : 100

Instruction to Candidates:

- 1) Attempt any **Five** questions.
- 2) All questions carry equal marks.

Q1) (a) What are Data Acquisition systems also explain its necessity?

(b) Explain various types of recorders ?

Q2) (a) Explain the strain Gauge? Give classification and describe anyone in details.

(b) Explain potential transformer with its construction ratio and phase angle error including the equivalent circuit diagram.

Q3) What are the main applications of piezoelectric transducers? Give description of its working and role of piezoelectric crystal.

Q4) (a) Give principal operation and constructional features of LVDT with its neat diagram.

(b) Give working principle of photoelectric transducer.

Q5) (a) Distinguish between LCD and LED.

(b) Describe the features of Nixie tube with its diagram.

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Q6) With help of schematic diagram, explain the complete working and construction of CRT.

Q7) A capacitive transducer used two quartz diaphragms of area 750 mm^2 separated by a distance of 3.5 mm . The capacitance is 370 pF when no pressure is applied to the diaphragm. A pressure of 900 kN/m^2 , when applied to the top diaphragm produces a deflection of 0.6 mm . Find the value of capacitance after applying the pressure.

Q8) Write short notes on:-

- (a) Magnetic Tape recorders
- (b) Harmonic distortion analyzer
- (c) Fourteen Segment Display
