SQ - 42

Seat No.	

Total No. of Pages : 03

S.Y.B.Tech. (Semester - III) (CBCS) (SET-A)
Examination, May 2025
Electronics and Telecommunication Engg.
Transducers Measurement (PCC-ETC-303)
Sub. Code : 73249/77811

Day and Date : Friday - 09-05-2025 **Total Marks : 70**

Time : 10.30 a.m. to 1.00 p.m.

Instructions : 1) All question are compulsory.
2) Figures to right indicates full marks.
3) Assume suitable data, if required.

Q.1) Solve MCQ's **(14)**

1) The arms consisting of the resistances R1 and R2 are called .....
   A) resistance arms B) impedance arms
   C) source arms D) ratio arms

2) Quantities are digitized using .....
   A) D/A converter B) oscillator
   C) amplifier D) A/D converter

3) Q factor is called .....
   A) Quality factor B) Quantity factor
   C) Queen factor D) Quarter factor

4) Schering bridge is used for .....
   A) low voltages only B) low and high voltages
   C) high voltages only D) intermediate voltages only

5) Ramp type DVM uses .....

A) a linear ramp technique

B) a non-linear ramp technique

C) an exponential ramp technique

D) an asymptotic ramp technique

6) Data acquisition system can be used in .....

A) 10 ways B) 8 ways

C) 4 ways D) 2 ways

7) The data acquisition system implies input data collection

A) in mixed signal form

B) in analog form

C) in digital form

D) in the form of binary codes

Q.2) Attempt Any Two of following. **(14)**

A) Explain phototransistor in detail and also write its application.

B) Explain the characteristics of a transducer.

C) With the help of principle, construction and working, explain the electromagnetic flow meter.

Q.3) Attempt Any Two of following. **(14)**

A) Explain the block diagram of an instrumentation amplifier in detail.

B) Explain with the help of neat diagram, the motion transducer. Write the advantages and disadvantages.

C) Explain the block diagram of chopper stabilized amplifier with principle and construction.

Q.4) Attempt Any Two of following. **(14)**

A) Explain sampling CRO with block schematic.

B) Explain Integrating type Digital voltmeter with block schematic and waveforms.

C) Explain Frequency and phase measurement using Lissajous pattern.

Q.5) Solve Any Two of following. **(14)**

A) Explain the static and dynamic characteristics of an Instrument.

B) Explain different parts of Basic CRO with block schematic.

C) Write short note on (Attempt any Two)

i) CRO probes.

ii) De Sauty's Bridge

iii) Digital measurement of time