Seat No.

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OCT-NOV 2025 WINTER EXAMINATION

1154 B.Tech. CBCS

Sub. Name: Transducers and Measurement

Sub. Code: 73249/77811

Day and Date: Wednesday,10-12-2025 **Total Marks: 70**

Time: 02:30 PM To 05:00 PM

Instructions: **1. All questions are compulsory**
2. Figures to the right indicate full marks

Special Inst.: **Use of Scientific calculator is allowed**

Q1) Solve the following MCQ's **[14]**

1. Strain gauge has a __ **[2]**
A. low temperature coefficient of resistance
B. high temperature coefficient of resistance
C. zero temperature coefficient of resistance
D. infinite temperature coefficient of resistance

2. The transducer outputis ____ **[2]**
A.exponential
B.unit step
C.non-linear
D.Linear

3. How can the input be isolated from the system? **[2]**
A. using optocouplers
B. using op-amps
C. using a capacitor
D. using rectifiers

4. Data measurement systems are ___ **[2]**
A.not flexible
B.Rigid
C.less flexible
D.more flexible

5. Data acquisition system can be used in _____ **[2]**
A. 10 ways
B. 8 ways
C. 4 ways
D. 2 ways

6. CRO is a _____ **[2]**
A.fast x-y plotter
B.slow x-y plotter
C.medium x-y plotter
D.not a plotter

7. In control applications, one arm of the bridge circuit contains a __ **[2]**
A.capacitive element
B.resistive element
C.inductive element
D.impedance element

Q2) Attempt any two questions **[14]**

1. Draw the block diagram of instrumentation system and explain each block in brief. **[7]**

2. With the help of principle, construction and working explain the electromagnetic flow meter. **[7]**

3. Explain with the help of neat diagram the motion transducer write the advantages and disadvantages. **[7]**

Q3) Attempt any two questions **[14]**

1. Explain rotary variable differential transformer. Write the advantages and Disadvantages. **[7]**

2. Explain thermocouple with the help of principle, construction and working. **[7]**

3. With the help of principle and construction explain the electromagnetic flow meter. **[7]**

Q4) Attempt any two questions **[14]**

1. Explain sampling CRO with block schematic. **[7]**

2. With block schematic & wave forms explain integrating type digital voltmeter **[7]**

3. With block schematic explain function generator. **[7]**

Q5) Attempt any two questions **[14]**

1. Explain working of Q-meter in detail **[7]**

2. Explain in detail General specifications of DVM **[7]**

3. What is Attenuator? Explain its types. **[7]**

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -
This Question Paper may be distributed for following Subjects as common code.
सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

1] (1154) B.Tech. CBCS (73249) Transducers and Measurement Part 2 SEM 3
2] (101) Bachelor of Engineering (77811) Transducers and Measurement Part 2 SEM 3