

- Q.25 Explain working and construction of R.T.D.
 Q.26 Explain Digital transducer.
 Q.27 What is potentiometer.
 Q.28 Discuss Piezo-electric transducer.
 Q.29 Explain Linearization.
 Q.30 Discuss Potentiometer.
 Q.31 Explain electromagnetic pickup.
 Q.32 Discuss capacitive microphone.
 Q.33 Write a short note on characteristics of transducer.
 Q.34 Explain Differential capacitive pick-up.
 Q.35 Give five selection criteria for transducer.

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Instrumentation & Control
Subject:- Transducer and Signal Conditioning

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Inductive transduction involves _____.
- Change in capacitance
 - Change in resistance
 - Change in inductance
 - None of these
- Q.2 Shaft Encoder is a _____ type of Transducer.
- Analog
 - Digital
 - Mechanical
 - Electrical
- Q.3 Microphone is used to measure _____ Signal.
- Electric
 - Magnetic
 - Acoustic
 - Light
- Q.4 Hot wire Anemometer is used to measure flow rate of thermely _____ material.
- Conductive
 - Non-Conductive
 - Both A and B
 - None of these

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain construction, working and type of strain gauges.
 Q.37 Explain digital transducer with example.
 Q.38 Write a note of following:
 a) RVDT b) F to V converter

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- Q.5 RTD is a _____ type of Transducer.
 a) Inductive b) Capacitive
 c) Resistive d) Digital
- Q.6 A Piezo electric crystal generates voltage when subjected to _____ force.
 a) Electrical b) Mechanical
 c) Hydraulic d) None of these
- Q.7 Which of the following transducer is of resistive type.
 a) Stain gauge b) LDR
 c) RTD d) All of these
- Q.8 Hot wire Anemometer is used to measure _____.
 a) Flow b) Current
 c) Voltage d) Pressure
- Q.9 The Stain gauge is normally used for _____.
 a) Dynamic measurement
 b) Static measurement
 c) Transient measurement
 d) None of these
- Q.10 What is the frequency of the supplied alternating current in India.
 a) 70KHz. b) 30kHz.
 c) 50Hz. d) 60Hz.

SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Electromegntatic pickup is a resistive type of transducer. (True/False)
- Q.12 Thermocouple is based on _____ effect.
- Q.13 Inductive microphones are mostly used in underwater applications. (True/False)
- Q.14 Mention any one material used for R.T.D.
- Q.15 Expand R.V.D.T.
- Q.16 Mention one use of capacitive transducer.
- Q.17 Microphone convert _____ energy into _____ energy.
- Q.18 Name one Digital transducer.
- Q.19 Shaft Encoder is a _____ type of transducer.
- Q.20 Expand L.V.D.T.

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Explain Capacitivepickup.
- Q.22 Explain construction and working of Inductive microphone.
- Q.23 Explain classification of transducer in short.
- Q.24 Describe L.V.D.T.