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SUBJECT CODE NO: - Y-2237
FACULTY OF SCIENCE AND TECHNOLOGY
B. Sc. (PATTERN-2013) (T.Y SEM VI)
Examination April / May - 2024
Electronics Paper-XIX (Instrumentation)

[Time: 1:30 Hours]

[Max. Marks: 50]

Please check whether you have got the right question paper.

N. B

1) Attempt all questions.

Q.1 a) Explain the working of LED display. 10

b) With neat diagram explain X-Y recorder. 10

OR

a) What is static error? Explain types of static error. 10

b) Explain atomic frequency and time standards. 10

Q.2 a) With the help of neat diagram explain FM recording, 10

b) Describe the working and construction of LCD display 10

OR

Write short notes on any four. 20

a) Resistance temperature detector (RTD)

b) Photo conductive cell

c) Pizo-Electric transducer

d) LCD display

e) Thermister

f) Resistance thermometer

Q.3 Attempt the following by selecting correct answer from given option. 10

1) Which of the following essential features is possessed by an indicating instrument?

a) Deflecting device

b) Controlling device

c) Damping device

d) All of the above

2) A potentiometer may be used for

a) Measurement of resistance

b) Measurement of current

c) Calibration of ammeter

d) All of the above

- 3) Switching time of LEDs is of the order of
a) 1s b) 1ms c) 1ns d) 1 μ s
- 4) The X-Y recorder uses _____ variables to positioning of head.
a) Two b) Three c) Four d) Five
- 5) Under which of the following conditions a bridge is balanced?
a) When no current flows
b) When the temperature of the circuit is high
c) When power dissipation is high
d) When no voltage drop across the circuit
- 6) Self-generating transducers are _____ transducers.
a) Positive b) Active
c) Secondary d) Inverse
- 7) Which of the following is not a characteristic of an ideal transducer?
a) High dynamic range b) Low linearity
c) High repeatability d) Low noise
- 8) Which of the following represent active transducer?
a) Strain gauge b) Thermistor
c) LVDT d) Thermocouple
- 9) Which of the following is an analog transducer?
a) Encoders b) Strain gauge
c) Digital tachometers d) Limit switches
- 10) What is the principle of operation of LVDT?
a) Mutual inductance b) Self-inductance
c) Permanence d) Reluctance