TED (15/19) 4041
(Revision – 2015/19)

N21 – 03139

Reg. No……
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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER – 2021

ELECTRONIC INSTRUMENTS AND MEASUREMENTS

[Maximum Marks: **75**] [Time: **2.15** Hours]

PART-A

(Answer ***any three*** questions in one or two sentences. Each question carries ***2*** marks)

I. 1. Define resolution for an electronic instrument.

2. Write two applications of CRO.

3. What is a logic analyser?

4. Name the principle behind the working of Q meter.

5. Define telemetry. (3 x 2 = 6)

PART-B

(Answer ***any four*** of the following questions. Each question carries ***6*** marks)

II. 1. Explain the conversation of galvanometer in to voltmeter with necessary diagram.

2. List the specification of analog multimeter.

3. Draw the block diagram of digital storage oscilloscope.

4. Explain the working Principle of Capacitive Transducer.

5. List the applications of spectrum analyzer.

6. Differentiate between open loop and closed loop control system.

7. Draw the block diagram of potentiometric recorder. (4 x 6 = 24)

PART-C

(Answer ***any of the three units*** from the following. Each full question carries ***15*** marks)

UNIT – I

III. (a) Define instrument accuracy, precision, sensitivity and error. (8)

(b) Explain the working of galvanometer. (7)

OR

IV. (a) Explain the working of digital frequency meter with neat diagram. (8)

(b) Explain AC voltage measuring in analog multimeter. (7)

UNIT – II

V. (a) Explain constructional details of Cathode Ray Tube with neat sketch. (8)

(b) Explain thermopile with sketch. (7)

OR

VI. (a) Describe different types of CRO probes. (8)

(b) Differentiate sensor and actuator with examples. (7)

UNIT- III

VII. (a) Explain the measurement of resistance using Wheastone's bridge. (8)

(b) Explain the block diagram of function generator. (7)

OR

VIII. (a) Explain the method of finding capacitance using Schering's bridge. (8)

(b) Describe the principle of measuring frequency using Wein's bridge. (7)

UNIT - IV

IX. (a) Explain the block diagram of basic instrumentation system. (8)

(b) Draw the block diagram of X-Y recorder and list its applications. (7)

OR

X. (a) Draw and explain the block diagram of Data Acquisition System. (8)

(b) Explain the working of strip chart recorder. (7)

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