TED (15/19) -4041
(Revision- 2015/19)

A21-04042

Reg.No…….....
Signature. .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE – APRIL -2021.

ELECTRONICS INSTRUMENTS AND MEASUREMENTS

(Maximum Marks : 75) [Time : 2.15 hours]

PART–A

Marks

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

1. Define resolution.
2. What is thermopile?
3. Give two application of function generator.
4. What is Telemetry?
5. Give two specification of analog multimeter. (3x2=6)

PART - B

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

1. Explain the working of galvanometer.
2. Explain the working of CRT with neat sketch.
3. List the classification of transducers.
4. Explain the principle of Q-meter.
5. Describe the principle of measuring frequency using Wien bridge.
6. Explain the working of strip chart recorder.
7. Explain the block diagram of basic instrumentation systems. [4x6 =24]

PART - C

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

UNIT I

III (a) Explain the working of a digital multimeter meter. (9)

(b) Difference between moving coil and moving iron instruments. (6)

OR

IV (a) Explain the conversion of galvanometer into voltmeter and ammeter. (8)

(b) Differentiate between 4 ½ and 3 ½ digit display systems in multi meter. (7)

UNIT- II

V (a) Explain the functional block diagram of a CRO. (8)

(b) Describe the working principle of capacitive transducer. (7)

OR

VI (a) Explain the function of digital storage oscilloscope with block diagram. (8)

(b) Describe the working principle of LVDT with diagram. (7)

UNIT- III

VII (a) Explain resistance measurement using Wheatstone bridge. (7)

(b) Describe the block diagram of logic analyzer. (8)

OR

VIII (a) Describe the principle of impedance measurement using Maxwell's bridge. (7)

(b) Explain the function of spectrum analyzer with block diagram. (8)

UNIT – IV

IX (a) Explain the working of X-Y recorders with block diagram. (9)

(b) Differentiate open loop and closed loop control systems. (6)

OR

X (a) Explain the block diagram of digital DAS. (7)

(b) Explain the working of potentiometer type recorders with diagram. (8)

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