

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)
