



TED (10) – 3062

Reg. No. ....

(REVISION — 2010)

Signature .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2018

**ELECTRONIC INSTRUMENTS AND MEASUREMENTS**

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

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

1. Define instrument accuracy.
2. Define Transducer.
3. Name the bridge used to measure capacitance.
4. Define line regulation of power supply.
5. What is Q meter ?

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. List the specifications of digital multimeter.
2. Write short notes on CRO probes.
3. Explain the measurement of impedance using Hay's bridge.
4. Explain the working of shunt transistor voltage regulator.
5. Explain the working of Galvanometric recorders.
6. Explain the working of Optocoupler.
7. Explain the method for measuring different ranges of DC voltage using analog multimeter.

(5×6 = 30)



PART — C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT — I

- III (a) Draw and explain the working of galvanometer. 8  
(b) Explain the working of Ramp type digital voltmeter with block diagram. 7

OR

- IV (a) Explain block diagram of Digital multimeter. 8  
(b) Explain the conversion of galvanometer into ammeter. 7

UNIT — II

- V (a) Draw the block diagram of dual beam CRO and explain the functions of each block. 8  
(b) Explain the working of digital storage oscilloscope. 7

OR

- VI (a) Describe the operation of thermocouple. 7  
(b) Describe photovoltaic cell and their applications. 8

UNIT — III

- VII (a) Explain logic analyser with neat block diagram. 8  
(b) Explain the block diagram of basic instrumentation system. 7

OR

- VIII (a) Explain signal generator with the help of block diagram. 8  
(b) Explain data acquisition system with block diagram. 7

UNIT — IV

- IX (a) Explain the working of Potentiometer type Recorders. 7  
(b) Explain Specifications of Power Supplies. 8

OR

- X (a) Compare X-Y Recorders and Strip Chart Recorders. 6  
(b) Write short notes on Digital Controller System. 9