

TED (15) – 3032
(REVISION — 2015)

Reg. No.....
Signature

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

ELECTRICAL MEASURING INSTRUMENTS

[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. Write one example for absolute instrument.
2. Write any two qualities of spring used in an indicating instrument.
3. Write the classification of resistance on the basis of their values.
4. What is meant by creeping error ?
5. Name the instrument used to measure the earth resistance.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Damping torque is necessary in an indicating instrument. Why ?
2. Explain the working of a rectifier type instrument.
3. Write the various sources of errors in dynamometer type instruments.
4. Draw the circuit diagram for the measurement of 3 phase power by two watt meters.
5. Explain different methods for locating cable fault.
6. List the applications of CRO.
7. Write short note on TOD meter.

(5×6 = 30)

PART — C

Marks

(Maximum marks : 60)

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

UNIT — I

- III (a) Draw the diagram and explain the working of M. I. attraction type instrument. 8
 (b) Write the various mechanism for the production of controlling torque. 7

OR

- IV (a) With a neat diagram explain the constructional details and working principle of Permanent Magnet Moving Coil Instrument. 8
 (b) With the help of a sketch how damping is provided by air chamber mechanism. 7

UNIT — II

- V (a) Draw the diagram and explain the working of Dynamometer type Watt meter. 8
 (b) Write the constructional difference in compensated watt meter. 7

OR

- VI (a) Draw the diagram and explain the working of single phase induction type Energy meter. 8
 (b) Write the various errors in single phase induction type Energy meter. 7

UNIT — III

- VII (a) Explain the methods for measurement of medium resistance by Wheat stone's Bridge. 8
 (b) How capacitance is measured using Schering bridge. 7

OR

- VIII (a) Explain measurement of earth resistance by Earth Megger. 8
 (b) Draw the circuit diagram of Insulation Megger. 7

UNIT — IV

- IX (a) Draw the block diagram of CRO. 8
 (b) Write the working of Digital Voltmeter. 7

OR

- X (a) Describe the working of reed type frequency meter. 8
 (b) Explain the working of Synchroscope. 7
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