TED (15) – 5033

(REVISION — 2015)

Reg. No. .....

Signature .....

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

ADVANCED ELECTRICAL MEASUREMENTS & INSTRUMENTATION

[*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. List any two applications of photoelectric transducer.
2. Write the advantages of electronic type energy meter.
3. Name any two applications of EMGR.
4. Name any two methods of pressure measurement.
5. List the applications of control. (5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Describe about variable capacitance transducers.
2. Describe piezoelectric transducers.
3. Explain the working of digital frequency meter.
4. Explain invasive method of blood pressure measurements.
5. Describe the measurement of body temperature.
6. Describe the measurement of spectro photometry.
7. Describe the measurement of emissivity. (5×6 = 30)

Marks

PART — C

(Maximum marks : 60)

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

Unit — I

III (a) Explain variable resistance strain gauge transducers. 8

(b) Describe magneto resistive transducers. 7

Or

IV (a) Describe variable inductance RVDT transducers. 8

(b) Describe about hall effect transducers. 7

Unit — II

V (a) Describe the working of digital multimeter with block diagram. 8

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

Or

VI (a) Describe power quality analyzer with block diagram. 8

(b) Explain the working of XY recorder with block diagram. 7

Unit — III

VII (a) Describe the working of EEG recorders. 8

(b) Describe the working principle of electro mayography recording. 7

Or

VIII (a) Describe ECG recorders. 8

(b) Describe non invasive method of blood pressure measurements. 7

Unit — IV

IX (a) Describe the measurement of moisture content. 8

(b) Describe the measurement with biosensors. 7

Or

X (a) Describe the measurement of pressure. 8

(b) Describe the measurement of velocity. 7