



C09-EE-305

3243

BOARD DIPLOMA EXAMINATION, (C-09)

MARCH/APRIL—2018

DEEE—THIRD SEMESTER EXAMINATION

**ELECTRICAL AND ELECTRONIC MEASURING
INSTRUMENTS**

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. What is the difference between absolute instrument and secondary instrument?
2. Name the methods to produce damping torque.
3. What is meant by creep in an induction type of energy meter? How can it be prevented?
4. Write any three advantages and disadvantages of dynamometer type instrument.
5. A moving coil ammeter has a internal resistance of 10 Ω and gives a full-scale deflection of 100 mA. Calculate the value of shunt resistance to be connected across the meter for measuring 200 A.
6. Classify the resistances and give examples for each.
7. Briefly explain about transducer.

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8. What are the different types of digital voltmeters?
9. List any three advantages of digital instruments over analog instruments.
10. List three advantages of ramp type digital voltmeter.

PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain the construction of moving iron repulsion type instrument with neat sketch. 10
12. Explain the construction and working of single-phase dynamometer type power factor meter with a neat diagram. 10
13. Explain the construction and working of Merz—Price maximum demand indicator. 10
14. Explain the construction and working principle of single-phase induction type energy meter with a neat diagram. 10
15. Explain with a neat sketch, the construction and working of a potentiometer. 10
16. (a) Explain the classification of transducer. 5
(b) Explain about thermistor. 5
17. Explain the working of digital energy meter with neat sketch. 10
18. (a) Explain the methods of obtaining controlling torque. 5
(b) State at least five specifications of digital voltmeter. 5
