



C14-EE-304

4245

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2018

DEE—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) Answer should be brief and straight to the point
and shall not exceed *five* simple sentences.

1. Give the classification of measuring instruments according to their principle of working.
2. Define (a) accuracy and (b) resolution.
3. A moving coil instrument has 50 mA for FSD and has a resistance of 10 Ω . Calculate the value of shunt resistance to be used across the meter to enable it to be used as ammeter for measuring 100 A.
4. What are the applications of CT and PT?
5. Give the classification of resistances.
6. Write the applications of potentiometers.
7. What are the applications of transducer?

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8. State the advantages of LVDT.
9. Write any six basic components of analog electronic measuring instruments.
10. State the different types of 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. (a) Explain the method of Eddy current damping with neat sketch. 5
(b) What are the advantages of digital instruments over analog instruments? 5
12. Explain the construction and working of PMMC instrument with neat sketch.
13. Explain the construction and working of dynamometer type instrument with neat sketch.
14. Explain the common errors and their remedies in a single-phase induction type energymeter.
15. Explain the construction and working of Weston synchroscope with neat sketch.
16. Explain the method of measuring unknown resistance using potentiometer.
17. Explain the use of thermocouple in measurement of temperature.
18. Explain the working of single-phase digital energymeter with block diagram.

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