3243

BOARD DIPLOMA EXAMINATION, (C–09)

MARCH/APRIL—2016

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

1. Give one example for the following instruments :
   (a) Indicating instrument
   (b) Integrating instrument
   (c) Recording instrument
2. Write a short note on pointers.
3. State any three advantages of dynamometer-type instruments.
4. State the advantages of moving iron instrument.
5. Draw the circuit diagram for measuring the three-phase power using 2 wattmeter.
6. Write any three applications of potentiometer.
7. Explain primary and secondary transducer.

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8. State any three specifications of digital multimeters.

9. State the components of three-phase digital energy meter.

10. State any three advantages of digital instrument.

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 Merze price maximum demand indicator with neat sketch.

12. Explain the construction and working of PMMC ammeter with a neat sketch.

13. Explain the method of extending the range of ammeter and voltmeter with neat sketch.

14. Explain the working of 3-phase 3-element-type energy meter with a neat sketch.

15. Explain the construction and working of Megger with a neat diagram.

16. Explain briefly about unbonded and bonded resistance wire strain gauge with neat sketch.

17. Explain the working of single-phase digital energy meter with neat block diagram.

18. *(a)* What are the different types of torques needed in indicating instrument? Explain each briefly.

(b) Explain the working of ramp-type digital voltameter.

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