



C14-EE-304

4246

BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL—2017
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. Distinguish among indicating, recording and integrating instruments. 3
2. Explain with a neat sketch the eddy-current damping used in indicating instruments. 3
3. List the common errors in PMMC instruments. 3
4. State the advantages and disadvantages of dynamometer-type instruments. 3
5. What are the different methods of measuring resistances? 3
6. Explain the working of potentiometer. 3
7. Write a brief note on semiconductor sensors. 3

- * 8. Explain the advantages and disadvantages of thermistors. 3
- 9. Mention specifications of digital multimeter. 3
- 10. State the advantages of digital energy meters. 3

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) What is the purpose of controlling torque in measuring instrument? 5
- (b) State the uses of tong tester (clamp meter). 5
- 12. Explain with neat sketch, the construction and working of attraction-type moving-iron instruments. 10
- 13. (a) Write a short note on instrument transformers. 5
- (b) List out the applications of instrument transformers. 5
- 14. Explain the construction and working of 3-phase, 2-element type energy meter with a neat sketch. 10
- 15. A moving-coil instrument has a resistance of 10 ohms and gives full scale deflection when carrying a current of 50 mA. Calculate the resistance to be used to measure voltage up to 175 V. 10
- 16. Explain the working of series-type ohmmeter with a neat sketch. 10
- * 17. (a) Write the advantages and disadvantages of LVDT. 5
- (b) State the applications of LVDT. 5
- 18. Explain the working of three-phase digital energy meter. 10
