



C14-AEI-305

**4218**

**BOARD DIPLOMA EXAMINATION, (C-14)**  
**OCT/NOV—2016**  
**DAEI—THIRD SEMESTER EXAMINATION**  
**ELECTRONIC MEASURING INSTRUMENTS**

*Time* : 3 hours ]

[ *Total Marks* : 80

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**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. Classify the bridge circuits.
2. State the use of meggar for insulation measurements.
3. List the specifications of DC ammeter.
4. List the specifications of digital multimeter.
5. List the specifications of digital *L-C-R* meter.
6. State the necessity of time-base generator.
7. Write the expression for deflection sensitivity.
8. List the specifications of CRO.
9. List the specifications of AF oscillator.
10. State the necessity of plotter.

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**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 and principle of operation of shunt-type ohmmeter.
- 12.** (a) Explain the Wheatstone bridge circuit with a neat sketch. 2+3  
(b) Draw and explain the working of dual-type digital voltmeter. 2+3
- 13.** Explain the working of ramp-type digital voltmeters with block diagram. 2+8
- 14.** (a) Explain the working of digital *L-C-R* meter with block diagram. 2+3  
(b) Explain the working of digital multimeter with block diagram. 2+3
- 15.** (a) Explain the dual trace oscilloscope with a block diagram. 2+3  
(b) Explain the basic principle of digital oscilloscope with a block diagram. 2+3
- 16.** Explain the procedure for measurement of voltages (DC and AC), frequency, phase, using CRO.
- 17.** (a) Explain the working of AF oscillator (sine and square) with block diagram. 2+3  
(b) Explain the importance of shielding in RF generators. 5
- 18.** (a) Explain the working of *Q* meter with a neat diagram. 2+3  
(b) Explain the working of digital IC tester with block diagram. 2+3

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