



C20-AEI-304

7217

BOARD DIPLOMA EXAMINATION, (C-20)

OCTOBER/NOVEMBER—2023

DAEI – THIRD SEMESTER EXAMINATION

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. List the different torques needed for driving analog instruments.
2. State the principle of rectifier type voltmeter.
3. State the principle of operation of PMMC instruments.
4. List any three advantages of digital instruments over analog instruments.
5. List any three specifications of digital voltmeters.
6. Write the expression for deflection sensitivity.
7. List any three front panel controls of CRO and state their function.
8. List any three front panel controls of AF oscillator and state their function.
9. State the importance of shielding in RF generators.
10. List any three recorders.

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **eight** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. (a) Explain the resistance measurement by using the Wheatstone bridge.

(OR)

(b) Explain the inductance measurement by using the Maxwell's bridge.

12. (a) Explain the working of digital multimeter with the help of a block diagram.

(OR)

(b) Explain the working of digital frequency meter with the help of a block diagram.

13. (a) Explain the dual trace oscilloscope with a block diagram.

(OR)

(b) Explain the Triggered sweep with necessary circuit.

14. (a) Explain the working of RF signal generator.

(OR)

(b) Explain the working of function generator with the help of block diagram.

15. (a) Explain the working of Q-meter with a block diagram.

(OR)

(b) Explain the working of digital IC tester with a block diagram.

PART—C

10×1=10

- Instructions :** (1) Answer the following question.
(2) The question carries **ten** marks.
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

16. Explain the capacitance measurement using Schering bridge.

★★★