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C09–AEI–**402**

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BOARD DIPLOMA EXAMINATION, (C–09)

OCT/NOV—2016

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

1. Classify the analog-measuring instruments.

2. State the principle of extending the range of DC voltmeter.

3. Draw the circuit diagram of Wheatstone bridge.

4. Draw the block diagram of digital LCR meter.

5. List the specifications of digital frequency meter.

6. Draw the block diagram of CRO.

7. State the necessity of time-base generator.

8. Define deflection sensitivity and write the expression.

9. What is the importance of shielding in RF generator?

10. State the necessity of plotters.

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 PMMC instrument.

12. *(a)* Explain the construction and principle of series-type ohmmeter. 5

(b) Explain the working of differential voltmeter. 5

13. Explain the working of digital LCR meter with block diagram and list its specifications.

14. Explain the working of digital frequency meter with block diagram.

15. Explain the principle of sampling oscilloscope with block diagram.

16. *(a)* Explain the triggered sweep circuit with necessary circuit diagram. 7

(b) Draw the block diagram of digital oscilloscope. 3

17. Explain the working of AF oscillator with block diagram.

18. Explain the working of a *Q*-meter with diagram.

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