C09–AEI–**402**

3412

BOARD DIPLOMA EXAMINATION, (C–09)

MARCH/APRIL—2014

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. Give the principle of PMMC instrument.

2. State the use of Megger.

3. Draw a neat sketch of Wheatstone bridge and give its balance equation.

4. List any three specifications of digital multimeter.

5. Compare digital instruments with analog instruments.

6. Draw and label the parts of CRO.

7. State the necessity of time-base generator.

8. Define deflection sensitivity.

9. List the specifications of AF oscillator.

10. State the necessity of plotters.

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)* Explain the principle and working of rectifier type voltmeter. 5

(b) Explain the construction and principle of series type ohmmeter. 5

12. *(a)* Give any three applications of bridges. 3

(b) Explain capacitance measurement using Schering bridge. 7

13. *(a)* List the specifications of digital voltmeter. 4

(b) Explain the working of dual slope type digital voltmeter. 6

14. *(a)* List the specifications of LCR meter. 3

(b) Explain the working of LCR meter with block diagram. 7

15. *(a)* What are the conditions for stationary and flicker-free waveforms? 4

(b) Explain the procedure for measurement of frequency and time period using CRO. 6

16. *(a)* Explain trigger sweep with necessary circuit. 5

(b) Explain dual trace CRO with neat diagram. 5

17. *(a)* List the front panel controls of AF oscillator. 4

(b) Explain the working of function generator with block diagram. 6

18. *(a)* Explain the working of Q meter. 4

(b) Explain the working of logic analyzer with block diagram. 6

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