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C09–AEI–**402**

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BOARD DIPLOMA EXAMINATION, (C–09)

OCT/NOV—2013

DAEIE—FOURTH SEMESTER EXAMINATION

ELECTRONIC MEASURING INSTRUMENTS

Time : 3 hours] [*Total Marks* : 80

PART—A

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point.

1. Classify the analog measuring instruments.

2. Define the loading effect in voltmeters.

3. State the principle of extending the range of DC ammeter.

4. List the specifications of digital frequency meter.

5. Draw the block diagram of ramp-type DVM.

6. List the conditions for flicker-free waveforms.

7. List the various controls of CRO.

8. State the necessity of time-base generator.

9. State the importance of shielding in RF generators.

10. State the necessity of recorders.

PART—B

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 of full-wave rectifier type voltmeter with necessary diagram. 5

(b) Explain the working of differential voltmeter. 5

12. *(a)* Explain the capacitance measurement using Schering bridge. 8

(b) Draw the circuit of series-type ohmmeter. 2

13. Explain the working of dual slope integration-type DVM with block diagram. 10

14. *(a)* Explain the working of digital multimeter with block diagram. 8

(b) List the advantages of digital instruments. 2

15. Draw the diagram of CRT and describe the function of its different parts. 10

16. *(a)* Explain the trigger sweep circuit with necessary diagram. 6

(b) Explain the procedure for phase measurement using CRO. 4

17. *(a)* Explain the working of AF oscillator (sine and square) with block diagram. 8

(b) List the applications of AF oscillators. 2

18. *(a)* Explain the working of digital IC tester with block diagram. 8

(b) Draw the diagram of Q-meter. 2

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