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C16-AEI–304

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BOARD DIPLOMA EXAMINATION, (C-16)

AUGUST/SEPTEMBER—2021

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. Classify bridge circuits based on exciting voltage and mention the balancing conditions of bridges.

2. State the principle of rectifier type voltmeter.

3. Draw the circuit diagram of shunt type ohmmeter.

4. List the specifications of digital multimeter.

5. Draw the diagram of ramp type digital voltmeter.

6. State the necessity of time base generator.

7. State the conditions for flicker-free waveforms.

8. List any three specifications of CRO.

9. List the applications of RF signal generator.

10. State the necessity of plotter.

PART—B

10×5=50

Instructions : (1) Answer *any* **five** questions.

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

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Explain the construction and principle of operation of PMMC instrument with diagram.

12. Explain the inductance measurement using Maxwell's bridge.

13. Explain the working of digital LCR meter with block diagram.

14. Explain the working of successive approximation type digital voltmeter with block diagram.

15. Explain the block diagram of general purpose CRO.

16. Explain the principle of operation of storage oscilloscope with block diagram.

17. Explain the working of AF oscilloscope (sine and square) with block diagram.

18. Explain the working of XY recorders with block diagram.

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