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C14–EC–303

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BOARD DIPLOMA EXAMINATION, (C–14)

OCT/NOV—2018

DECE—THIRD SEMESTER EXAMINATION

ELECTRONIC MEASURING INSTRUMENTS

Time : 3 hours]

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 any three types of AC Bridges.

2. Draw the diagram for range extension of DC Ammeter.

3. List any three important specifications of digital volt meters.

4. State any three factors that affect the accuracy and resolution of a frequency meter.

5. List any three advantages of Triggered sweep circuit.

6. List any three probes used in CRO.

7. List any 3 applications of Function generators.

8. List any 3 applications of power meters.

9. State the need for plotters and recorders.

10. State the working principle of Q-meter.

PART—B

10×5=50

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

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

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

11. *(a)* Draw and explain the principle of rage extension of DC volt meter.

(b) Find out the value of multiplier resistance required to convert a basic D Arsenval meter with a full scale deflection current of 150 A and an internal resistance of 500 into a 20V voltmeter meter.

12. Explain the construction and working of series Ohm meter with a neat sketch.

13. Draw and explain the working of digital LCR meter.

14. *(a)* Draw the block diagram of Ramp type digital volt meter.

(b) Draw the block diagram of RF signal generator

15. Explain the working of CRO with neat block diagram.

16. Explain the the procedure for measurement of (a) raise time, (b) fall time and (c) duty cycle.

17. Draw and explain the working of AF oscillator with a neat sketch.

18. Draw and explain the working of X–Y recorder.

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