3471

BOARD DIPLOMA EXAMINATION, (C–09)
APRIL/MAY—2015
DCE—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) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. What is an ohmmeter? Classify the ohmmeters.

2. Draw the circuit of FET input voltmeter.

3. Draw the block diagram of distortion factor meter.

4. Define accuracy of a frequency meter.

5. List the specifications of digital multimeter.

6. List the advantages of digital instruments.

7. List the applications of plotters.

8. Define sensitivity of CRO.

9. Why is effective shielding required in RF signal generator?

10. Draw the diagram of bolometer-type RF power meter.

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. Draw Schering bridge circuit and explain the capacitance measurement using Schering bridge.

12. Define a shunt and explain the principle of extending the range of ammeter with an example.

13. Explain the working of logic analyzer with neat block diagram.

14. Explain the working of digital LCR meter with neat block diagram.

15. *(a)* Sketch a CRT and label the parts. 5

(b) If an electrostatically deflected CRT has deflecting plates 2·0 cm long and 7·5 mm apart and the distance of the screen from the centre of the deflection plates is 50 cm, find the deflection sensitivity of the tube, when the accelerating voltage is 2·5 kV. 5

16. Draw the block diagram of a CRO and explain the function of its each block.

17. Draw the block diagram of a function generator and explain its working.

18. Explain the working of AF sine and square wave oscillator with block diagram.

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