



C14-EC-303

4239

BOARD DIPLOMA EXAMINATION, (C-14)
OCT/NOV—2015
DECE—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) Answer should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Explain the principle of extending the range of DC ammeter.
2. Explain loading effect.
3. Define deflection sensitivity of CRO.
4. Mention the conditions for flicker free wave forms.
5. List advantages of digital instruments over analog instruments.
6. Define accuracy and resolution of a meter.
7. List the applications of RF signal generator.
8. Explain the importance of shielding in RF generators.

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9. Define stray ^{*} capacitance and stray inductance of a coil.
10. State the need for plotters and recorders.

PART—B

10×5=50

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. Explain the working of FET input voltmeter with a circuit diagram.
12. Explain the inductance measurement using Maxwell's bridge.
13. Explain the working of successive approximation digital voltmeter with block diagram.
14. (a) Draw the block diagram of digital LCR meter. 5
(b) Draw the block diagram of AF oscillator. 5
15. Explain the working of function generator with block diagram.
16. Draw block diagram of general purpose CRO and describe the function of each block.
17. (a) Draw and explain triggered sweep circuit. 6
(b) Define pulse and draw the waveform of a pulse. 4
18. Explain the working of distortion factor meter with block diagram.
