



C09-EC-405

3471

BOARD DIPLOMA EXAMINATION, (C-09)
OCT/NOV—2013
DECE—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 and shall not exceed *five* simple sentences.

1. Explain the use of high voltage probe.
2. What is the principle of the differential voltmeter?
3. Draw the neat block diagram of distortion factor meter.
4. What are the basic building blocks of digital instrument?
5. List the specifications of digital LCR meter.
6. List the specifications of digital multimeter.
7. What is a sampling oscilloscope?
8. List the applications of plotters.
9. Draw the neat diagram of bolometer type RF power meter.
10. List various types of signal generators with reference to frequency.

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PART—B

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

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

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

11. Draw Maxwell's bridge circuit and explain the measurement of inductance using Maxwell's bridge.
12. Explain the construction and principle of operation of PMMC instrument.
13. Explain the working of digital frequency meter with neat block diagram.
14. Explain the working of logic analyser with neat block diagram.
15. (a) List different types of probes used in oscilloscopes. 4
(b) Explain sensitivity, frequency response and voltage measurement of a CRO. 6
16. (a) List the conditions for stationary and flicker-free waveforms. 6
(b) What is the need of time base in CRO? 4
17. Draw the block diagram of a function generator and explain its working.
18. Draw the complete block diagram for an RF signal generator with internal AM and FM sources and explain its operation.

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