



C14-EC-303

4239

BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL—2017
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) Answers 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 voltmeter.
2. List the important errors in bridge measurement.
3. Define pulse width, rise time, fall time of a pulse.
4. Mention the conditions for stationary waveforms.
5. List the specifications of digital voltmeter.
6. Write the factors effecting the accuracy and resolution of a frequency meter.
7. List the front panel controls of AF oscillator.
8. Write three applications of RF signal generators.

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9. Define stray inductance and stray capacitance of a coil.
10. Mention any three limitations of AC bridge method for measurement of small inductance and capacitance.

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 construction and working of series-type ohmmeter with a circuit diagram.
12. Explain the capacitance measurement using Schering bridge.
13. Explain the working of ramp-type digital voltmeter with a block diagram.
14. (a) Draw the block diagram of function generator. 5
(b) Draw the block diagram of digital frequency meter. 5
15. Draw the block diagram of general purpose CRO and describe the function of each block.
16. (a) Explain the function of various front panel controls of CRO. 7
(b) List the different types of probes, used in oscilloscopes. 3
17. Explain the working of RF signal generator with a block diagram.
18. Explain the working of Q meter with a block diagram.
