



C14-EC-303

4239

**BOARD DIPLOMA EXAMINATION, (C-14)**  
**MARCH/APRIL—2018**  
**DECE—THIRD SEMESTER EXAMINATION**  
**ELECTRONIC MEASURING INSTRUMENTS**

Time : 3 hours ]

[ Total Marks : 80

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**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 the characteristics of ideal voltmeters and ideal ammeters.
2. What is drift problem in FET voltmeter?
3. List any three advantages of digital instruments over analog instruments.
4. Define (a) accuracy and (b) resolution.
5. List the conditions for flicker-free waveforms.
6. Define (a) rise time and (b) fall time.
7. List any three specifications of AF oscillators.

- \* 8. List any three applications of RF signal generators.
9. Define stray capacitance of a coil.
10. Define distortion factor.

**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. (a) Draw the diagram of Wheatstone bridge. 3  
(b) Draw and explain the working of PMMC instrument. 7
12. Draw and explain the inductance measurement using Maxwell's bridge.
13. Draw and explain the working of ramp-type digital voltmeter.
14. (a) Draw the block diagram of digital LCR meter. 5  
(b) Draw the block diagram of function generator. 5
15. Draw the block diagram of CRO and explain the function of each block.
16. Draw and explain the working of triggered sweep circuit.
17. Draw and explain the working of RF signal generator with a neat sketch.
- \* 18. Draw and explain the working of digital IC tester.

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