



C09-EC-405

**3471**

**BOARD DIPLOMA EXAMINATION, (C-09)**  
**OCT/NOV—2017**  
**DECE—FOURTH 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. What is loading effect?
2. Mention the applications of Wheatstone bridge.
3. Write the use of high voltage probe.
4. Write any three advantages of digital instruments over analog instruments.
5. Explain the terms 'overrange' and 'half-digit'.
6. List any three applications of spectrum analyzer.
7. What is the necessity of a time base signal in CRO?

- \* 8. List the different types of probes used in oscilloscope.
- 9. Explain the importance of shielding in RF generator.
- 10. List any three applications of a power meter.

**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 principle of operation of PMMC instrument with a neat sketch.
- 12. Explain the inductance measurement using Maxwell's bridge.
- 13. Explain the working of ramp-type DVM with a block diagram.
- 14. Explain the working of a digital multimeter with a block diagram.
- 15. Sketch the CRT and describe the function of different parts.
- 16. Explain the working of X-Y recorder with block diagram.
- 17. Explain the working of AF sine and square wave oscillator with block diagram.
- \* 18. Explain the working of bolometer-type RF power meter with necessary figure.

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