



C20-BM-502

7613

BOARD DIPLOMA EXAMINATION, (C-20)

OCTOBER / NOVEMBER—2023

DBME – FIFTH SEMESTER EXAMINATION

MEASUREMENT AND TEST EQUIPMENT

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. Classify the methods of measurement with examples.
2. List the precautions to be taken while using an ammeter.
3. List the applications of Maxwell's bridge.
4. Write the advantages of digital instruments over analog instruments.
5. Define the term Resolution.
6. Draw the block diagram of CRO.
7. List the condition for stationary waveform.
8. State the principle of energy measurement.
9. List the applications of logic probes.
10. State the necessity of Recorder.

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **eight** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

- 11.** (a) Explain the characteristics of (i) repeatability, (ii) resolution and (iii) sensitivity.

(OR)

- (b) Explain the principle characteristics of (i) back slash, (ii) dead zone and (iii) hysteresis.

- 12.** (a) Explain the construction and working principle of series type ohmmeter.

(OR)

- (b) Explain inductance measurement using Maxwell bridge.

- 13.** (a) Explain the ramp type digital voltmeter with block diagram.

(OR)

- (b) Explain the working of digital LCR meter with block diagram.

- 14.** (a) Draw CRT and describe the functions of different parts.

(OR)

- (b) Explain the horizontal deflection system.

- 15.** (a) Explain the working of AF power meter.

(OR)

- (b) Explain the methods of testing active components.

PART—C

10×1=10

- Instructions :** (1) Answer the following question.
(2) The question carries **ten** marks.
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 16.** Explain the working of digital multimeter with block diagram and list its specifications.

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