

7244

BOARD DIPLOMA EXAMINATION, (C-20)

NOVEMBER/DECEMBER—2022

DECE – THIRD SEMESTER EXAMINATION

ELECTRONIC MEASUREMENTS & CONSUMER GADGETS

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

- Instruction :** (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 any three characteristics of an ideal ammeter.
2. List any three advantages of digital instrument over analog instruments.
3. Define deflection sensitivity of CRO.
4. Explain the conditions for flicker free waveforms in CRO.
- * 5. List any three applications of RF signal generator.
6. Draw the block diagram of digital IC tester.
7. State the purpose of equalizer in audio systems.
8. What are the uses of woofer and tweeters?
9. List any three specifications of loudspeaker.
10. List any three HDTV standards.

PART—B

8×5=40

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- 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 construction and principle of operation of PMMC instrument.

(OR)

- (b) Describe the working of digital frequency meter with block diagram.

- 12.** (a) Explain the working of AF oscillator with block diagram.

(OR)

- (b) Explain the working of logic analyser with block diagram.

- 13.** (a) Explain the constructional features and principle of operation of PMMC Loudspeaker.

(OR)

- (b) Explain the principle, construction and working of crystal headphones.

- 14.** (a) Explain with functional block diagram the working principle of digital camera.

(OR)

- (b) Draw the block diagram of the digital transmission and reception system in TV.

- 15.** (a) Explain with suitable functional block diagram the working of digital LCD TV receiver.

(OR)

- (b) * Explain the construction, working and characteristics of LCD.

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. Analyse the method to measure phase difference between two signals by using CRO by producing Lissajous patterns.

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