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BOARD DIPLOMA EXAMINATION, (C-16)

JUNE/JULY—2022

DECE - FOURTH SEMESTER EXAMINATION

ELECTRONIC MEASUREMENTS AND CONSUMER GADGETS

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.   List the characteristics of ideal ammeter.

2.   Define accuracy of a meter.

3.   List the conditions of stationary waveforms in CRO.

4.   Explain the procedure for measurement of depth of modulation using CRO.

5.   List three applications of RF signal generator.

6.   State the need for plotter and recorders.

7.   List three advantages of magnetic recording.

8.   Define music and noise.

9.   Distinguish between progressive and interlaced scanning.

10. List the features of HDTV.

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Instructions : (1) Answer *any* **five** questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Explain the construction and working principle of operation of ramp type digital voltmeter with neat block diagram.

12. Explain the principle of working of digital storage oscilloscope with a block diagram.

13. Explain the procedure to measure frequency and phase of a signal using Lissajjous patterns.

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

(b) Explain the working of logic probe.

15. Explain the construction and working of carbon microphone with a neat diagram and draw its polar characteristics.

16. Explain the concept of noise reduction using Dolby system and features of Dolby Digital 5.1 Surround Sound.

17. *(a)* State the need for horizontal and vertical scanning.

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(b) Explain how chrominance signals are transmitted on one carrier in PAL system.

18. Draw the block diagram of a colour TV receiver and state the functions of each block.

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