



C14-EC-303

4239

BOARD DIPLOMA EXAMINATION, (C-14)
SEPTEMBER/OCTOBER - 2020
DECE—THIRD SEMESTER EXAMINATION
ELECTRONIC MEASURING INSTRUMENTS

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 any three types of AC bridge.
2. What is the loading effect in meters?
3. Define accuracy and resolution of a meter.
4. Write the specifications of digital LCR meter.
5. List the conditions for flicker-free waveforms in CRO.
6. Define the following parameters of a pulse :
 - (a) Pulse width
 - (b) Rise time
 - (c) Fall time

- * 7. Write a short note on AF power meter.
- 8. Write the importance of shielding in RF signal generator.
- 9. State the need for recorder.
- 10. Write the basic working principle of spectrum analyser.

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 working of FET input voltmeter with circuit diagram.
- 12. Explain the method of resistance measurement using Wheatstone bridge.
- 13. Explain the working of successive approximation type digital voltmeter with block diagram.
- 14. (a) Draw the block diagram of digital frequency meter.
(b) Draw the block diagram of function generator.
- 15. Draw the block diagram of general purpose CRO and write the function of each block.
- 16. Explain the procedure for measurement of (a) voltage, (b) frequency, (c) phase angle, (d) time interval and (e) depth of modulation.
- * 17. Explain the working of AF oscillator with block diagram.
- 18. Explain the working of Q-meter with block diagram.
