

2321**October 2024**

Time - Three hours
(Maximum Marks: 100)

- [N.B.** 1. Answer all questions under Part-A. Each question carries 3 marks.
2. Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.]

PART - A

1. Write any three applications of measurement systems.
2. Differentiate between accuracy and precision.
3. State the disadvantages of dynamometer type instruments.
4. Draw the circuit diagram of Wheatstone bridge.
5. Give the advantages of digital energy meters.
6. Draw the simplified block diagram of digital frequency meter.
7. What are the limitations of Maxwell's inductance bridge?
8. How a Lissajous pattern is produced on the screen of CRO?
9. Differentiate between sensor and transducer.
10. What is Hall-effect transducer?

[Turn over.....

PART – B

11. (a) Explain about the secondary instruments and their working mode.

(Or)

(b) Explain the methods of producing damping torque with neat diagrams.

12. (a) Draw and explain the construction and working of Permanent Magnet Moving Coil (PMMC) instruments.

(Or)

(b) Explain the ammeter – voltmeter method of measurement of resistance.

13. (a) With necessary circuit diagram, explain the construction and working of single phase energy meter.

(Or)

(b) Explain the rotating type phase sequence indicator with a neat diagram.

14. (a) Explain how unknown capacitance is measured using Schering bridge with a neat diagram.

(Or)

(b) Explain the basic components of signal conditioning system with a neat sketch.

15. (a) Describe about the construction and working principle of RVDT with a neat diagram.

(Or)

(b) Explain the block diagram of telemetry system and give its applications.
