

(3 Hours)

[Total marks : 80]

Note: 1) Question No.1 is compulsory.

2) Attempt any three questions out of remaining five question.

3) Assume suitable data if required.

1 Solve any four

- A. Explain galvanometer used as a detector in d.c. bridge. 5
- B. Write short note on Extension range of ammeter 5
- C. Explain resolution and sensitivity of digital meters. 5
- D. How digital meters are advantageous over analog meters? 5
- E. Differentiate between active and passive transducers. 5

2 (A) Write short note on Production of controlling torque through spring control method. 10

(B) Why synchroscope is required? Explain with neat diagram westone type synchroscope. 10

3 (A) Describe construction and working principle of moving iron instrument and hence derive the torque equation. 10

(B) Explain with block diagram ramp type digital voltmeter. 10

4 (A) Explain a suitable bridge to measure Low Resistance. 10

(B) Explain with phasor diagram how schering bridge can be used to measure unknown capacitor 10

5 (A) Draw circuit diagram and explain Maxwell's bridge. 10

(B) Explain the construction and working of thermocouple.also mention the advantages and disadvantages 10

6 (A) Explain how Crompton's type potentiometer can be used for calibration of voltmeter . 10

(B) Explain Anderson bridge for measuring self inductance. Draw neat circuit diagram and phasor diagram. 10

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