

(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

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| 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
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(B)	Why synchroscope is required? Explain with neat diagram weston type synchroscope.	10
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3 (A)	Describe construction and working principle of moving iron instrument and hence derive the torque equation.	10
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(B)	Explain with block diagram ramp type digital voltmeter.	10
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4 (A)	Explain a suitable bridge to measure Low Resistance.	10
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(B)	Explain with phasor diagram how Schering bridge can be used to measure unknown capacitor	10
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5 (A)	Draw circuit diagram and explain Maxwell's bridge.	10
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(B)	Explain the construction and working of thermocouple. Also mention the advantages and disadvantages	10
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6 (A)	Explain how Crompton's type potentiometer can be used for calibration of voltmeter.	10
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(B)	Explain Anderson bridge for measuring self inductance. Draw neat circuit diagram and phasor diagram.	10
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