B.E. Third Semester (Electrical & Electronics) (New)

Electrical Measurement and Instrumentation : 3 EX 05

P. Pages : 2 | AU - 2529

Time : Three Hours | Max. Marks : 80

Notes :
1. Answer **three** question from Section A and **three** question from Section B.
2. Due credit will be given to neatness and adequate dimensions.
3. Assume suitable data wherever necessary.
4. Illustrate your answer necessary with the help of neat sketches.
5. Use of pen Blue/Black ink/refill only for writing the answer book.

SECTION - A

1. a) Explain electrodynamic instruments. Obtain force & torque equation. **7**

b) Classify Measuring Instruments. How deflecting torque is created in analog meters? Explain. **7**

OR

2. a) Explain different forces necessary for proper working of an analog instruments. **7**

b) Explain electrostatic instruments with application. **7**

3. a) Explain Blondel's theorem. **6**

b) Explain measurement of active & reactive power in single phase circuit. **7**

OR

4. a) Derive torque equation of Wattmeter. **6**

b) Describe construction & working of Induction type energy meter. **7**

5. a) Explain error's in C.T. & how they are over come. **7**

b) Explain need of extension of range of instrument transformer. **6**

OR

6. a) Explain P.F. meter in detail. **7**

b) Explain phase sequence indicator in details. **6**

SECTION - B

7. a) Explain wheat stone bridge in details. **7**

b) Explain Kelvin's bridge in details. **6**

OR

8.	a)	Explain Maxwell's Bridge.	**7**
	b)	Explain Schering Bridge.	**6**
9.	a)	Explain & differential between Active & Passive transducer.	**7**
	b)	Explain current & voltage transducers.	**6**

OR

10.	a)	Explain Resistive, Inductive & capacitive transducers.	**9**
	b)	State Advantages of L.V.D.T.	**4**
11.	a)	Explain time, frequence & phase angle measurement using C.R.O.	**9**
	b)	Explain RTD in details.	**5**

OR

12.	a)	Explain manometer & it's applications.	**7**
	b)	Explain thermocouple & thermistor.	**7**

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