Paper / Subject Code: 49404 / ELECTRICAL AND ELECTRONIC MEASUREMENTS

1T00813 - S.E.(ELECTRICAL)(Sem III) (CBSGS) / 49404 - ELECTRICAL AND ELECTRONIC MEASUREMENTS Q. P. Code: 37877

Duration – 3 Hours

No. 6.

N.B.:- (1) Question No.1 is compulsory.

Total Marks - 80

(2) Attempt any three questions out of remaining Question No. 2 to Question

(3) Assume suitable data if necessary and justify the same.

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Q 1 a)	Define types of possible errors in an instrument. How these errors can be minimized?	5
b)	Explain resolution and sensitivity of digital meter.	5
c)	Explain piezo electric transducer.	5
d)	Explain a De Sauty's bridge to measure the capacitance of capacitor.	5
Q 2 a)	Explain working principle, construction of moving iron instrument and hence derive the torque equation.	10
Q 2 b)	Describe construction, working principle and theory of dynamometer type wattmeter.	10
Q 3 a)	Explain with block diagram Ramp type digital voltmeter.	10
Q 3 b)	Explain Kelvins double bridge to measure low resistance and hence derive the equation for unknown resistance.	10
Q 4 a)	Explain Hay's bridge to measure inductance and hence derive the equation for inductance using above bridge, draw phasor diagram.	10
Q 4 b)	Explain the calibration of voltmeter and ammeter using potentiometer.	10
Q 5 a)	Explain Thermistor .Write down advantages and disadvantages of Thermistor.	10
Q 5 b)	Explain the construction and working of LVDT with advantages and disadvantages.	10
Q 6 a)	Write a short note on PMMC instrument	10
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