Sem III/ETRx/CBSGS/EIM/N-D-17/19-12-17

Q.P. Code: 23747

Max Marks: 80 **Duration : 3Hrs**

N.B.-1] Question no.1 is compulsory
2] Attempt any three from remaining

Q 1.Attempt any four questions [20]

a) Define Accuracy, Precision, Linearity, Sensitivity, Resolution
b) Write applications of Q-Meter
c) Explain Role of Delay Line in CRO
d) Write Selection Criteria of Transducers.
e) Write brief information of Programmable Logic Controller
f) List pressure, level and flow transducers

Q 2.Attempt the following questions [20]

a) Draw and Explain Measurement of Inductance using Maxwell Bridge
b) Draw and Explain Measurement of Low and High Resistance using, Kelvin's Double Bridge and Mega ohm Bridge

Q 3.Attempt the following questions [20]

a) Draw and Explain Digital Storage Oscilloscope (DSO) also write applications of DSO.
b) Draw and Explain Lissajous Figures in Detection of Frequency and Phase

Q 4.Attempt the following questions [20]

a) Compare RTD, Thermisters, Thermocouples- with their construction , Ranges, and Applications
b) Draw and Explain any one application of Linear Variable Differential Transformer

Q 5.Attempt the following questions [20]

a) Draw and Explain Capacitance type method for level measurement .write advantages and disadvantages it.
b) Draw and Explain Rotameter for flow measurement. write advantages and disadvantages of it

Q 6.Write a short note on [20]

a) Elastic Pressure Transducers
b) Data acquisition system (DAS)- Single channel
c) Errors in Measurement
d) Auto Ranging and Auto Zero Adjustments in Digital Instruments.