

B.Sc. - II (CBCS Pattern) Semester-V
USELT09 - Electronics Paper-I : Electronic Instrumentation

P. Pages : 2

Time : Three Hours



GUG/W/24/13109

Max. Marks : 50

-
- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw neat and well labelled diagram wherever necessary.

1. a) Explain how will convert PMMC galvanometer into DC Ammeter? Construct the DC Voltmeter using PMMC and Explain its working. **10**

OR

- b) Draw the block diagram of digital multi-meter and explain the function of each block? Calculate the value of multiplier resistance of the 50V range of a DC Voltmeter that uses a 50uA meter movement with an internal resistance of 1k-ohm. **10**

2. a) Draw block diagram of CRO and explain the working of each block. Explain deflection sensitivity in CRO. **10**

OR

- b) Draw neat labelled diagram for internal structure of CRT and explain electron gun assembly of CRT. **10**

3. a) Draw the block diagram of PPL and Explain the function of each block? State the advantages of PPL. **10**

OR

- b) Explain the working of phase detector using an XOR gate? Draw the block diagram of function generator and explain the function of each block. **10**

4. a) Draw the diagram of LVDT and explain its working with waveform? State its advantages and disadvantages of LVDT? **10**

OR

- b) What is transducer? Explain active and passive transducer with an example? Explain the working of piezoelectric transducer? **10**

5. Attempt **any ten** out of twelve Questions. **10**

- a) What is Voltmeter?

- b) State the advantages of digital multi-meter.
- c) Define the sensitivity of voltmeter.
- d) What is CRO Probe?
- e) State the function of aquadag coating in CRT?
- f) State the application of CRO.
- g) Define capture range of PLL?
- h) What is VCO?
- i) What is the signal generator?
- j) What is thermistor?
- k) State the application of capacitive transducer.
- l) What is photovoltaic cell?
