2SELE-T2 - Electronics Paper-II (Measuring Devices)

P. Pages : 1

Time : Three Hours

0427

GUG/W/17/5574

Max. Marks : 50

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Notes :
1. All questions are compulsory and carry equal marks.
2. Draw neat and well labelled diagram wherever necessary.
3. Use of log table/calculator is allowed.

EITHER

1. a) What is PMMC? Explain the conversion of PMMC into DC voltmeter. Define sensitivity of voltmeter.   **10**

OR

   b) Explain how d' Arsonval movement will be converted to measure DC current.   **10**
   A 1mA meter movement with an internal resistance of 100Ω is to be converted into 0-100mA ammeter. Calculate the value of the shunt resistance required.

EITHER

2. a) Explain the construction and working of EVM using FET. State its advantages.   **10**

OR

   b) Obtain balance condition of ac bridge.   **10**
   In an a.c. bridge, find out the impedance Z_1 in a balanced AC bridge in which
   $Z_2 = 250\Omega$
   $Z_3 = 400\Omega \angle 30°$
   $Z_4 = 100\Omega \angle -50°$

EITHER

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

OR

   b) Explain the working of time base circuit used in CRO.   **10**
   Define : a) Fluorescence   b)   Phosphorescence

EITHER

4. a) Explain passive probes used for CRO. Explain how voltage can be measured with CRO.   **5+5**

OR

   b) Draw the block diagram of dual trace CRO and explain its working.   **10**

5. a) Explain the loading effect of voltmeter.   **2½**

   b) Obtain the balance condition in schering bridge.   **2½**

   c) Explain the concept of synchronization in CRO.   **2½**

   d) Explain how the phase can be measured with CRO.   **2½**

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