Bachelor of Science (F.Y.B.Sc.) Second Semester Old

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

P. Pages : 1 **GUG/W/18/1237**

Time : Three Hours * 0 9 5 0 * Max. Marks : 50

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.

1. EITHER.

a) What is PMMC? **1+6+3**
Explain conversion of PMMC into series type ohmmeter.
State applications of ohmmeter.

OR

b) What is Ayrton shunt? **3+7**
Design an Ayrton shunt to provide an ammeter with current ranges 1A and 5A if PMMC has internal resistance of 50Ω and full scale deflection current of 1mA.

2. EITHER.

a) Draw block diagram of digital multimeter and explain in brief. **10**

OR

b) Explain Schering bridge and obtain conditions of its balance. **8+2**
State applications of Schering bridge.

3. EITHER.

a) Draw block diagram of CRO and explain function of each block. **10**

OR

b) Explain electrostatic focusing in CRO. **10**

4. EITHER.

a) Explain passive probe used for CRO. **10**

OR

b) Explain measurement of phase and frequency with CRO. **5+5**

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

b) Explain Owen's bridge. **2½**

c) Explain time base circuit using UJT. **2½**

d) A Lissajous pattern obtained on CRO has 5 horizontal tangencies and one vertical tangency. Calculate unknown frequency if known frequency is 300 Hz. **2½**

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