V. P. & R. P. T. P. Science College
FIRST UNIT TEST
US05CELE04

4/10/2016
11:00 am to 12:30 pm
25 marks

**Multiple Choice Questions: (Any 3)** **3 marks**

1. At the null condition the current through the detector is
(i) minimum.
(ii) maximum.
(iii) zero.

2. Schering bridge is used to measure capacitance of a capacitor whose phase angle is
(i) is nearer to 90°.
(ii) is lower than 90°.
(iii) is equal to 90°.



3. Transducer forms a part of _____ in instrumentation system.
(i) Input device
(ii) Output device
(iii) Processing device

**Q. 2 Short Questions: (Any 2)** **4 marks**
1. State two differences between ac and dc bridge.
2. What do you mean by Dissipation factor. What does it tell?
3. Define Transducer.

**Q.3** Describe in detail Kelvin double bridge. **6 marks**

**OR**

**Q.3** The ac bridge is in balance with following constants. Arm AB, R=450 Ω, Arm BC, R=300 Ω in series with capacitor C=0.256 μF and arm CD unknown, arm DA, R=200 Ω in series with inductor L=15.9 mH. The oscillator frequency is 1 KHz. Find the constants of arm CD. **6 marks**

**Q.4** Describe in detail Schering bridge and show that the dial of Schering bridge can be calibrated directly in terms of dissipation factor D.

**OR**

**Q.4** Describe in detail working of Wein bridge. **6 marks**

**Q.5** Write short note on Transduce. **6 marks**

**OR**

**Q.5** Describe in detail LVDT. **6 marks**

************BEST OF LUCK***************