

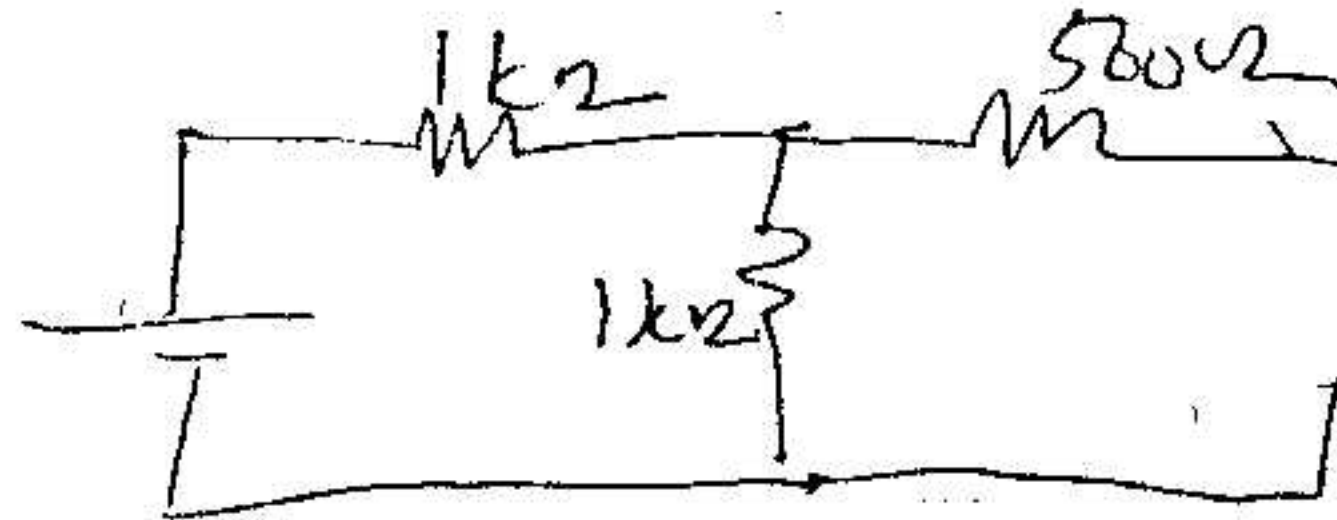
**B.Tech. Degree IV Semester (Special Supplementary)  
Examination, March 2007**

**EE 403 ELECTRICAL MEASUREMENTS AND MEASURING INSTRUMENTS  
(1999 Admissions onwards)**

Time: 3 Hours

Maximum Marks: 100

- I a) Define the terms static sensitivity and instrument efficiency. (8)  
 b) A  $100\ \Omega$  ammeter is used to measure the value of current in the  $500\ \Omega$  resistor.  
 Calculate the :  
 i) actual value current  
 ii) measured value of current  
 iii) the percentage error in measurement



(12)

**OR**

- II a) Define the terms reproducibility drift, repeatability, accuracy and precision. (10)  
 b) Explain the loading effect due to shunt connected and series connected instruments. (10)
- III a) Explain the principle of operation of earth reggae. (10)  
 b) Explain the principle of operation of Wheastons bridge for resistance measurement. (10)
- OR**
- IV a) Explain how Anderson Bridge is used used to inductance. (10)  
 b) Explain how Schering Bridge is used to measure capacitance. (10)
- V a) Explain with a neat diagram the working of verni potentiometer. (10)  
 b) Explain the working of moving coil instruments. (10)
- OR**
- VI a) Explain the working of electro-static type ammeter. (10)  
 b) Explain the working of current and potential transformer and state their uses. (10)
- VII a) Explain the working principle of dynameter type wattmeter. (10)  
 b) Explain the working of single phase energy meter. (10)
- OR**
- VIII Explain the principle of operation of cathode ray oscilloscope. (20)
- IX a) Explain the working principle of a flux meter. (10)  
 b) Explain how Llyod Fisher square can be used for coreloss measure merit. (10)

**OR**

- X Write short notes on:  
 (i) Hibbert's magnetic standard  
 (ii) B.H.Curve  
 (iii) Polar curve  
 (iv) Flicker photometer (20)

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