

Quiz-2
Measurement and Instrumentation EC-501
III rd year EC1
Date: 10th September' 2012

Name:

Roll Number:

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1. The Wheatstone Bridge is used for the measurement of Unknown _____?
 - a). Inductor b). Resistor
 - c). Total Impedance d). Capacitor
2. Which one is NOT an AC Bridge Circuit?
 - a). Maxwell Bridge b). Schering Bridge
 - c). Kelvin Bridge d). Hay Bridge
3. For a Maxwell's bridge write the bridge balance condition—
 - a). $Z_1Z_x = Z_2Z_3$ b). $Z_x = Z_2Z_3Y_1$
 - c). $Z_2Z_x = Z_1Z_3$ d). $Z_x = Z_1Z_3Y_2$
4. For Hay's Bridge what is the value of unknown inductance—
 - a). $L_x = R_1C_2R_3$ b). $L_x = R_2R_3C_1$
 - c). $L_x = R_1R_2C_3$ d). $L_x = R_1 / (C_2 \cdot R_3)$
5. For Schering's Bridge what is the value of unknown capacitance—
 - a). $C_x = C_3 \frac{R_1}{R_2}$ b). $C_x = C_2 \frac{R_3}{R_1}$
 - c). $C_x = C_3 \frac{R_2}{R_1}$ d). $C_x = C_1 \frac{R_2}{R_3}$
6. Which of the following is NOT a problem/issue when we talk about High Frequency Measurements—
 - a). High Reactance due to stray series inductance.
 - b). Low Reactance due to stray shunt capacitance.
 - c). Decrease of effective resistance with frequency on account of proximity effect.
 - d). Increase of effective resistance with frequency on account of skin effect.

7. When we talk about high frequency measurement then what range of frequencies do we talk about—
- a). 0.1 to 100Hz b). 0.1 to 100MHz
c). 0.1 to 100GHz d). 0.1 to 10^9 GHz
8. In high frequency measurement what is the maximum value of air capacitor that can be used—
- a). 1pF b). 10pF
c). 100pF d). 1000pF
9. In reference to Radio Frequency Power Measurement, which of the following is a Technique of measurement of RF Power—
- a). Wheatstone Bridge b). Pyrometer Bridge
c). Wien's Bridge d). Bolometer Bridge
10. A small RF power of 10V is superimposed on the RF test Power and balance is obtained. When the RF power is made off, 15VAF is required to balance the bridge. If the bridge arm has a resistance of 20Ω , then what will be the RF power.
- a). 1.5623W b). 1.5624W
c). 1.5624W d). 1.5625W

