Bengal Institute of Technology

Bits2Bytes 2009

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**PROBLEM SPECIMEN**

FOR

**CIRCUIT QUIZ**

**Section A**

1. The statement “The total current flowing through a particular resistor is equal to the current in a loop, containing the internal resistance of the circuit and the resistor in series” is the:

a. Norton’s Theorem

b. Thevenin’s Theorem

c. Kirchoff’s law

d. Both a and c

Ans=b

2. When will maximum current flow in a RLC series circuit, given R=30ohm, L=0.1H and C=0.01uF.

a. For f=5000Hz

b. For f=5032Hz

c. For f=5500Hz

d. For f=6000Hz

Ans=b

Use f=1/ (2\*pi\*L\*C)

3. For what type of current will a Capacitive circuit conduct?

a. For alternating current

b. For direct current

c. Both a and b

d. None of these

Ans=c

Since any capacitive circuit conducts for both AC and DC (Transient Behavior).

**Section B**

**Problem statement**

1. **Taking a 50 Hz 10V a.c. supply double the voltage across a resistor.**

**Items to be used**

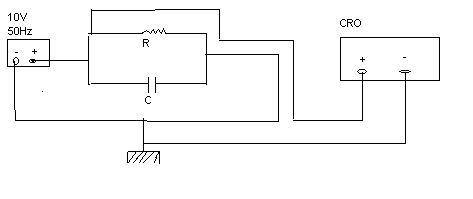
**a. 1 nos. 10 K Resistor**

**b. 1 nos. 1 uF capacitor**

**c. 10V 50Hz power supply**

**d. Oscilloscope to verify data.**

**Ans: Connect a and b in parallel, and then the whole set in series with the power supply. Plug the oscilloscope to the common node of a and b.**

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