Q.P. Code: **16EE205** **R16**

Reg. No: | | | | | | | | | | |

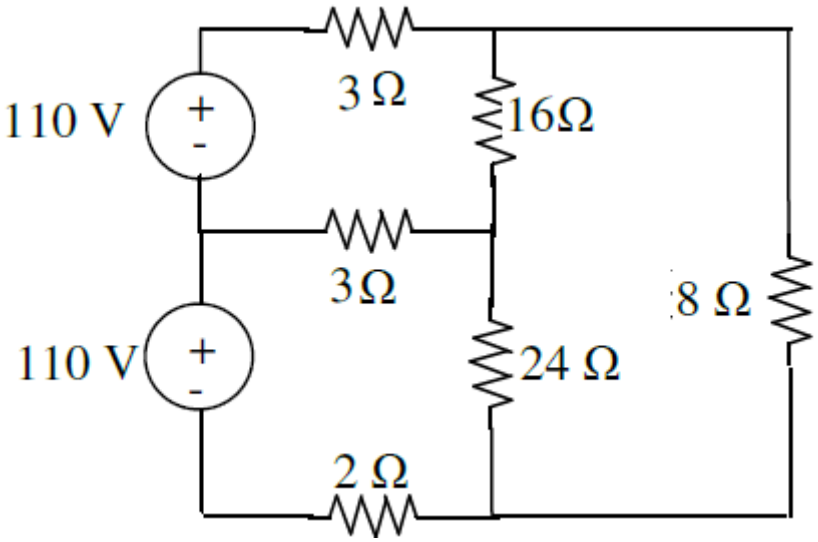
SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.TECH I Year II Semester (R16) Supplementary Examinations Dec 2017
NETWORK ANALYSIS
(ECE)

Time: **3 hours** Max. Marks:**60**

(Answer all Five Units **5 X 12 = 60** Marks)

UNIT-I

1	a	State and explain Kirchhoff's laws?	4M
	b	Using nodal analysis find all branch currents for the following circuit	8M



OR

2	a	Define the following terms i. Branch ii.Sub graph iii.Node iv.Tree	4M
	b	State and explain Norton's theorem?	8M

UNIT-II

3	a	Explain the phasor relation for R,L,C elements.	6M
	b	The impedances of parallel circuit are Z1= (6+j8) ohms and Z2 = (8-j6) ohms. If the applied voltage is 120V, find (i) current and power factor of each branch (ii) overall current (iii) power consumed by each impedance. Draw the phasor diagram.	6M

OR

4	a	Explain the complete response of source free parallel RLC Circuits.	6M
	b	Deduce the transient response source free series RL circuit	6M

UNIT-III

5		Obtain the expression for resonant frequency, bandwidth and Q-factor for parallel R-L-C circuit.	12M
		OR	
6		Write the comparison between series resonance and parallel resonance?	12M

UNIT-IV

7		Explain about the state variables and state variables of circuits.	12M
		OR	
8		Explain about proper and improper behavior of the circuits.	12M

UNIT-V

9		Explain the design procedure for a constant K low pass filter and its characteristics	12M
		OR	
10	a	What is a filter? Explain about various types of filters	6M
	b	What is a constant K low pass filter, derive its characteristics impedance	6M

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