CODE NO: 07A1EC05

2008 JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY

IV B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS
NETWORK ANALYSIS
(ELECTRONIC & COMMUNICATION ENGINEERING,ELECTRONIC & COMPUTER ENGINEERING, BIO-MEDICAL ENGINEERING)

AUG/SEP 2008

TIME : 3 HR
MARK : 80

Answer any FIVE Questions
All Questions carry equal marks

1. Derive an expression to convert a given 3-phase star connected circuit to equivalent delta connection.

2. Derive expression for R.M.S. and average value of a sinusoidal alternating quantity.

3. (a) Explain the phenomenon of resonance. Derive the formula for the resonant frequency of the series resonant circuit.

(b) Give the quality factor in terms of Bandwidth.

(c) Find the natural frequency of a series RLC circuit in which R = 200 ohms, L = 0.15 H and C = 5 micro Farads.

4. Draw the oriented graph, select a tree and obtain the tie-set schedule.

5. Obtain Norton's equivalent across terminals A and B for network

6. Find the Z parameters of the network & prove that the circuit is receprocal.

7. Derive the transient response of RLC series circuit with unit step input.

8. Describe a prototype T section band stop filter. Determine the formula required for designing band stop filter. With suitable sketches explain the advantages of mderived band stop filter.