

(DEC 224)

B. Tech DEGREE EXAMINATION, MAY - 2015

(Examination at the End of Second Year)

Electronics & Communications

Paper - IV : NETWORK ANALYSIS & SYNTHESIS

Time : 3 Hours

Maximum Marks : 75

Answer question No.1 compulsory

(10 × 1½ = 15)

Answer ONE question from each unit

(4 × 15 = 60)

- 1) a) What is a Lattice network?
b) What is an attenuator?
c) What is meant by open circuit impedance?
d) What is filter?
e) Define attenuator.
f) Define Equalizer.
g) What is meant by Positive real functions?
h) What is meant by Reactance functions?
i) Expression for constant K. high pass filter.
j) Define pass and stop bands.

UNIT - I

- 2) Explain the network functions for the one part and two parts with an example.

OR

- 3) a) Explain the Open Circuit Impedance and Short Circuit admittance for Two part networks.
b) Obtain the Relation b/w parameter sets.

UNIT - II

- 4) a) Define filter and explain about the characteristics impedance of symmetrical n/w's.
b) Explain the properties of symmetrical n/w's.

OR

- 5) a) Derive the expression for Constant K. low pass filter.
b) Derive the O/P expression for m-derived T-section filter.

UNIT - III

- 6) a) Describe the concept of symmetrical & Asymmetrical attenuators.
b) Write short notes on
i) Lattice attenuator
ii) Bridged 'T' attenuator

OR

- 7) a) Explain the configuration of equalizer.
b) Comparison b/w Bridged – T equalizer & Lattice equalizer.

UNIT - IV

- 8) a) Explain the concept of positive real functions and Reactance functions.
b) Explain about the RC & RL functions.

OR

- 9) Explain in detail about FOSTER and CAUER methods of synthesis.

