Total No. of Questions :5]

Roll No .....

EC - 505

B.E. V Semester

Examination, June 2015

Communication Network And Transmission Lines

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each questions are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

Unit-I

1. a) What are symmetrical and asymmetrical two part networks?

   b) Explain the terms image impedance and iterative impedance.

   c) Explain about the image transfer coefficient and iterative transfer coefficient.

   d) Explain about Lattice and Bridge T networks.

   OR

   Explain about symmetrical and asymmetrical attenuators and also discuss about their designing.

PTO

Unit-II

2. a) Analyse the working of passive LC Low pass filter.
   b) Explain briefly about the passive LC band elimination filter.
   c) Explain about the m-derived T-network Low pass filter.
   d) Discuss the Butterworth approximation method for designing high pass filter.

OR

Discuss the Chebyshev approximation method for designing Bandpass filter.

Unit-III

3. a) Designing a lowpass π filter having a cutoff frequency of 1kHz to operate with a terminated load resistance of 200Ω.
   b) Determine the nominal characteristic impedance and cutoff frequency for the low pass filter shown in fig.1

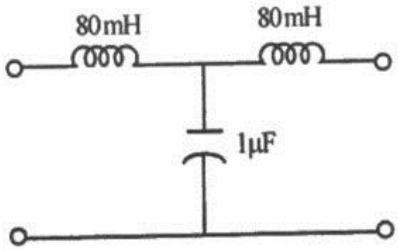

Fig 1

   c) Explain briefly about Foster and Cauer network.
   d) Explain about the Brune's method.

OR

Explain the Bott-Duffin method.

Unit-IV

4. a) What do you understand by the lumped parameter equivalent of transmission line.
   b) What is the function of phase equalizers.
   c) Discuss about the distortionless line.
   d) Discuss about reflection loss and insertion loss of the transmission line.

OR

Explain how to locate line fault.

Unit-V

5. a) Write a brief on the parameters of line and co-axial cable at radio frequency.
   b) What are dissipation less lines.
   c) How are standing waves formed? What is meant by standing wave ratio.
   d) Explain about eightwave, quarter-wave and half wave line.

OR

What is the need of stub matching? Explain about single and double stub matching.

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