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**EC - 505**

**B.E. V Semester**

Examination, December 2012

**Communication Network And Transmission Lines**

**Time : Three Hours**

**Maximum Marks : 70/100**

**Note :** 1. Attempt one question from each unit.

2. All questions carry equal marks.

**Unit - I**

1. a) Determine the image impedance, iterative impedance and characteristic impedance of symmetrical two port network.
- b) Discuss the design of symmetrical attenuators. Also discuss their working principle.

OR

2. a) Differentiate between image transfer coefficient and iterative transfer coefficient.
- b) Discuss the different matching techniques.

**Unit - II**

3. Discuss the designing of following filters:
  - a) m-derived filters.
  - b) Chebyshev approximation.

OR

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4. Discuss the designing of the following filters:
- Composite filter.
  - Butterworth approximation.

**Unit - III**

5. a) Explain briefly about Foster and cancer network.  
b) What is Bott Duffin method? Explain.

OR

6. a) What do you understand by minimum positive real function?  
b) Explain Brune's method.

**Unit - IV**

7. a) Explain briefly about attenuation and phase equalizers.  
b) Discuss briefly about the T and Z equivalents of a line.

OR

8. a) Explain briefly about open circuit and short circuit line.  
b) Discuss about the different losses in transmission lines.

**Unit - V**

9. Write short notes on the following:
- SWR
  - Double stub matching

OR

10. Write short notes on the following:
- Quarter wave line.
  - Microstrip lines.

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