Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

EC-5004 (CBGS)

B.E. V Semester

Examination, November 2018

Choice Based Grading System (CBGS)

Communication Networks and Transmission Lines

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. Determine the open circuit and short circuit impedances of the network shown in fig-1

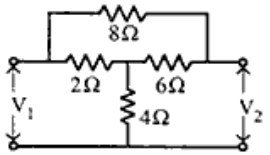

Figure 1

2. a) Discuss about lattice and bridge T networks.
   b) Discuss about symmetrical and asymmetrical attenuators and their design.

3. a) Design a low pass filter (both π and T networks) having a cut off frequency of 1kHz to operate with a terminated load resistance of 200Ω. Also find the frequency at which the filter offers attenuation of 19.1dB.
   b) Discuss about m-derived T-network low pass filter.

4. Discuss about butterworth approximation in filter design.

5. a) Discuss about foster and causer network.
   b) Discuss about Bott-Duffin method.

6. a) Discuss about the characteristic impedance and propagation constant of infinite transmission line.
   b) What are attenuation and phase equalizers? Also explain about distortionless line.

7. a) Discuss about voltage and current on a dissipation less line. Also explain what is standing wave and standing wave ratio.
   b) What is a Stub? What is the need of Stub matching? Discuss about single and double stub matching.

8. Write short notes on any two of the following :
   a) Composite filters
   b) Brune method
   c) Microstrip lines

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