Roll No.....

National Institute of Technology Delhi

Name of the Examination: B.Tech

Branch : EE & ECE

Semester : III

Course Name : Network Analysis & Synthesis

Course Code : EEL-201

Time: 2:00 hour

Maximum Marks: 25

Note:

- All Questions are compulsory.
- Do not write irrelevant theory.
- Assume data where ever required.

Q1) For the network shown in Fig. 1, determine the y-parameters. (4)

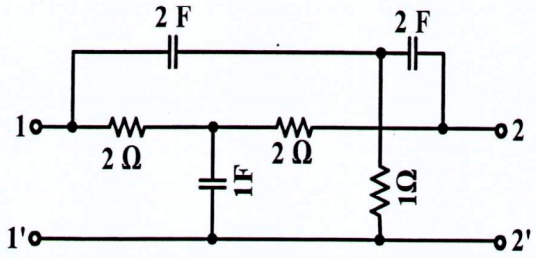

Fig.1

Q2) The h – Parameters of a Two – Port Network shown in the figure – 2 are $h_{11} = 1000\Omega$; $h_{12} = 0.003$; $h_{21} = 100$; $h_{22} = 50 \times 10^{-6}$ mho. Find V_2 and Z – Parameters of the network if $V_s = 10^{-2}\angle 0^0$ V. (4)

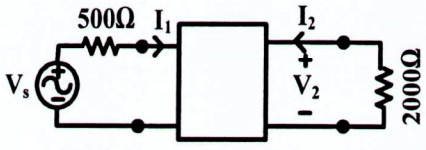

Fig. 2

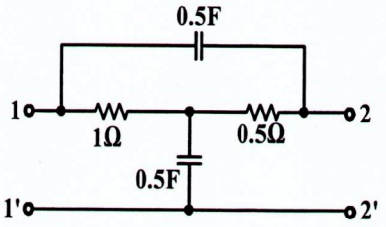

Fig. 3

Q3) For the bridge-T network as shown in fig-3, find the y-parameters and its equivalent Π- network. (4)

Q4) Determine the y and z-parameters for the network shown in fig-4. (4)

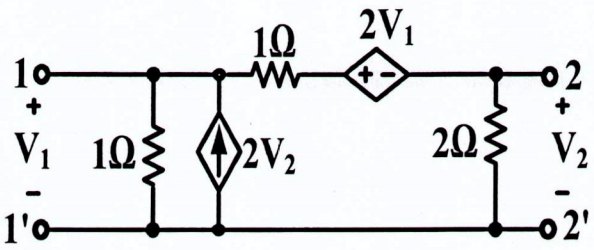

Fig-4

Q5) Express h-parameters in terms of y-parameters and ABCD-parameters of a two port network. (4)

Q6) Find the driving point impedance at the terminals 1-1'of the ladder network as shown in fig-5. (3)

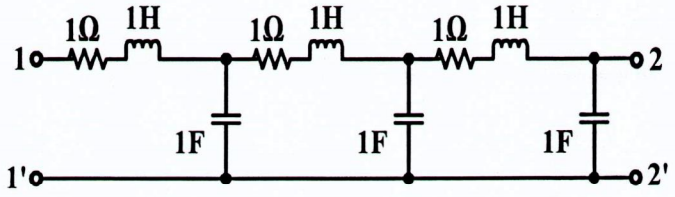

Fig-5

Q7) What are the advantages of polyphase systems over single-phase systems? (2)