ENSC3021 Tutorial Problems 5A

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Question 1.

Find the z-parameters for the two port network of figure 1.
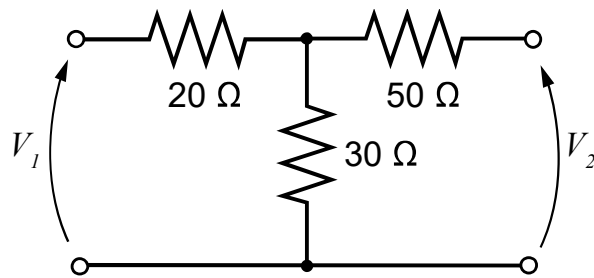
Figure 1.

Question 2.

Find the z-parameters for the two port network of figure 2
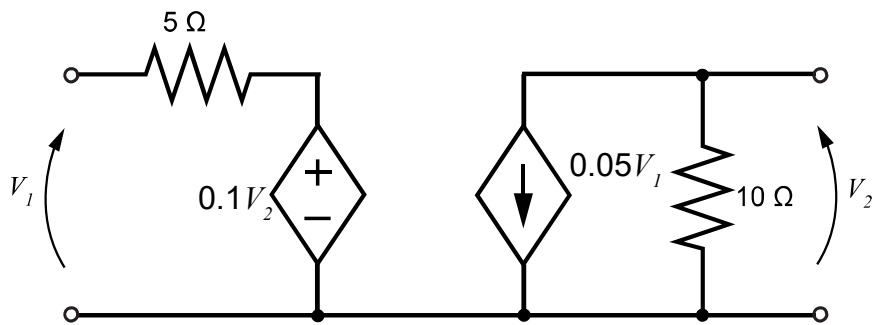
Figure 2.

Question 3.

A two port with the z parameters given below is connected as shown in figure 3.

$$[z] = \begin{bmatrix} 10^3 & 10 \\ -10^6 & 10^4 \end{bmatrix}$$

a)   Find the voltage gain of the two port, i.e. V_2/V_1.
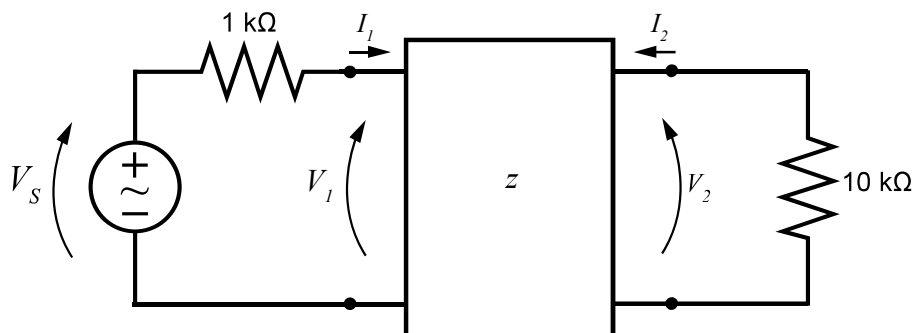b)   Find the input impedance to the two port, i.e. $Z_{in} = V_1/I_1$

Figure 3.

Question 4.

a) Find the ABCD (transmission) parameters for the network of figure 4.
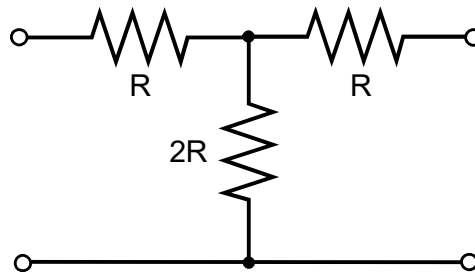

Figure 4.

b) Using this general result find the ABCD (transmission) parameters for the network of figure 5.
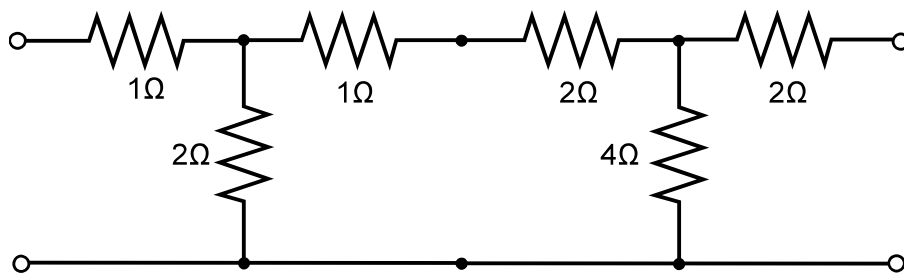

Figure 5.