1. Find the short-circuit parameters of the circuit shown below. Assume R = 5 kΩ, C = 10 pF and f = 3 MHz.
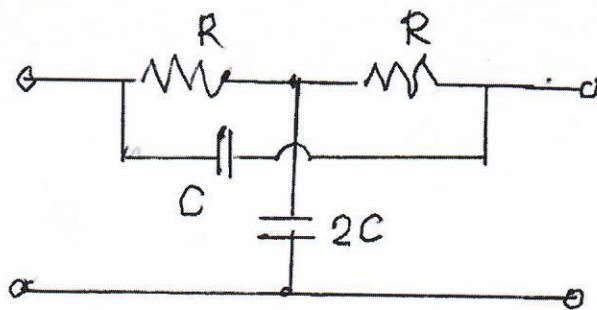
2. Two of the short-circuit admittances of the circuit shown are
$y_{11} = y_{22} = (7s^2 + 1)/(16s^3 + 4s)$. Find all element values.
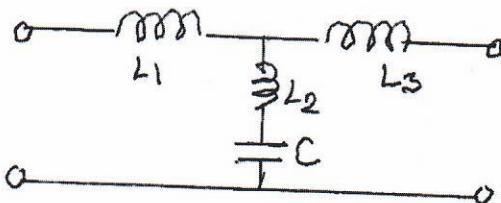
3. Find the chain matrices of the two-ports shown below.