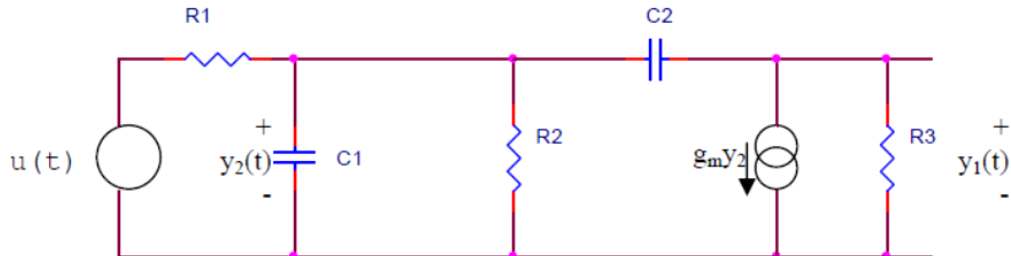


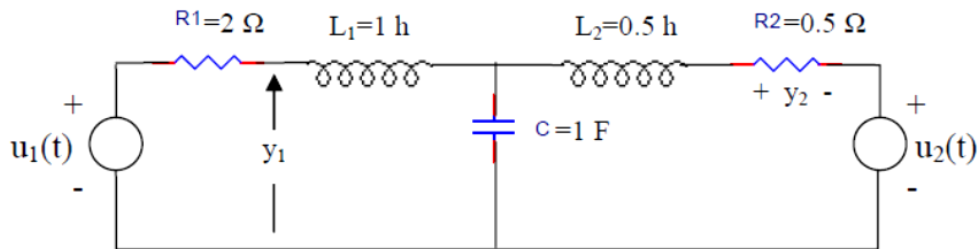
Sheet (5): Modeling in SSR

- (1) For the following networks write down the state equations and output equations and get the corresponding state space representation.

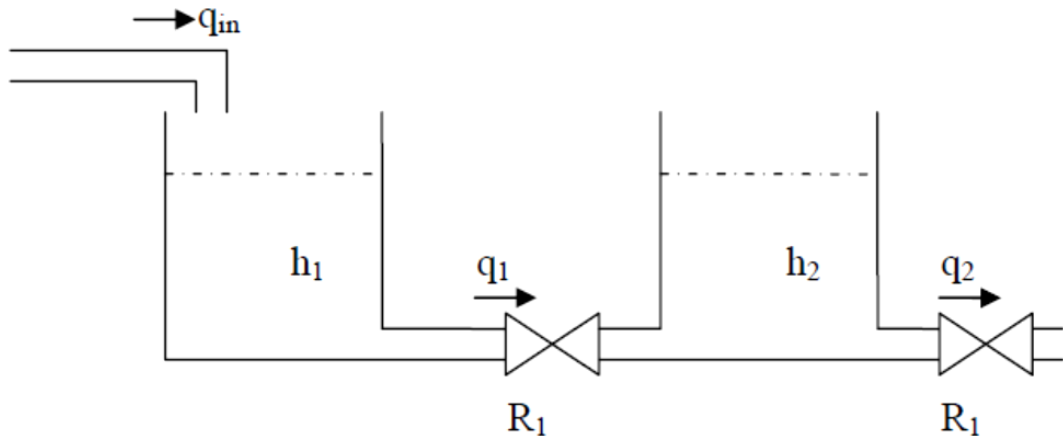
(a)



(b)



- (2) For the interacting two tank system shown below derive a suitable state space representation if the system has two outputs, the first output is the liquid level in the second tank and the second output is the flow rate from the second tank.



- (3) For the simple mechanical system shown derive a suitable state space representation

