Problem 1: [10points] We need to find maximum size and maximum weight matches, $M_s$ and $M_w$, respectively in a $4 \times 4$ input queued (IQ) switch in a given time slot. The switch uses virtual output queues and the states of the queues for the time slot of interest are shown in figures. In the following two figures, draw lines from inputs to outputs to indicate the two matches. Numbers written within cells show destination numbers.

Fig. 1: Maximum size matching

Fig. 2: Maximum weight matching

Problem 2: [10points]
(a) State the difference between maximal-size match and maximum-size match? Which of them is larger? Can they be equal?

(b) Intuitively, why $i$SLIP performs better than round-robin? You may like to think what happens to $Request$, $Grant$, and $Accept$ in the two cases.