

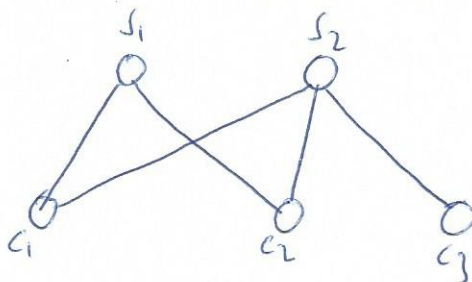
Econ 446 Spring 2013

3 Questions

Question 1

Consider the following network g of 2 common property resources and 3 agents. Let

$$u_i = \sum_{ij \in g} x_{ij} - \frac{1}{2} (\sum_{ij \in g} x_{ij})^2 - \sum_{ij \in g} x_{ij} \sum_{kj \in g} x_{kj}$$



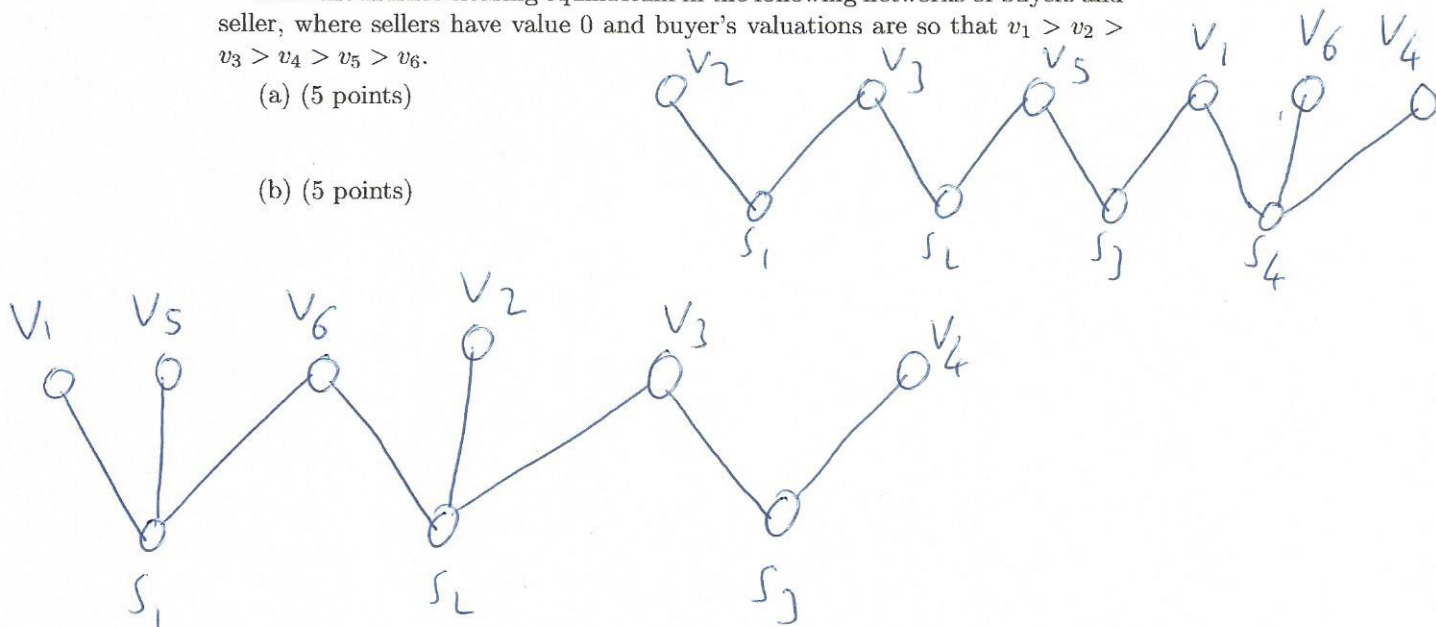
- (a) (5 points) Find the equilibrium?
- (b) (5 points) Find the efficient allocation.

Question 2

Find the market clearing equilibrium in the following networks of buyers and seller, where sellers have value 0 and buyer's valuations are so that $v_1 > v_2 > v_3 > v_4 > v_5 > v_6$.

- (a) (5 points)

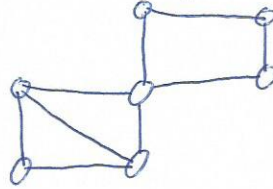
- (b) (5 points)



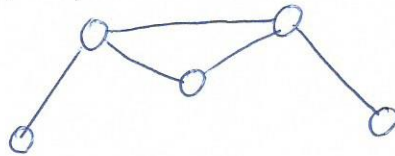
Question 3

Find the equilibrium at the following public good networks, where the utility function of an agent i at network g is $u_i = 2\sqrt{\sum_{ij \in g} e_j + e_i - e_i}$.

(a) (5 points)



(b) (5 points)



(c) (5 points)

