Applied Game Theory (HUL 311)

Minor (2) examination

21st March, 2015

Time limit: one hour

Attempt all questions.

1. Define rationalizability. Set up the Cournot duopoly game and characterize the set of rationalizable strategies for both the firms. (Use diagrams to explain the iterated eliminations.) [2 + 5.5]

2. Consider a group I of n agents who need to decide on efficient provision of a public good, say a public parking place. The decision variable is binary, i.e. one has to decide whether to build the parking place or not and net valuations (which may range from any negative to positive values) for the investment to each agent is a private information.

(a) Define efficiency in this set-up; [1.5]

(b) Do agents reveal their valuations in a direct mechanism that asks them to only report the valuations? If not, why? [1.5]

(c) Does there exist any mechanism which makes truth-telling a dominant strategy for all the agents? Is this mechanism budget-balanced? [4.5]