AP/ECON 4380 & GS/ECON 5950 : Midterm Exam

February 11 2015
11:30 am – 12:30 pm

Do all 3 questions. All questions count equally.

1. Show that a Condorcet winner must exist under pairwise majority rule if all voters' preferences are single–peaked.

2. Give an example of a profile of voter preferences in which some voter might be better off voting strategically [that is, by reporting a preference profile different from her true preference profile], if the social ordering is to be decided using a Borda count.

3. Suppose that all people in a jurisdiction had the same preferences, which could be represented by a utility function
$$u(c, g) = c + 2\sqrt{g}$$
where c is private consumption expenditure, and g is government expenditure **per person**. (Both c and g are measured in thousands of dollars per year.) People differ in their income y^i. The mean income $\bar{y}$ (in thousands of dollars per year) is 60, and the median income is 40.

In this jurisdiction, any public expenditure must be financed by a proportional income tax, so that the government's budget constraint is

$$\tau\bar{y} = g$$

where τ is the proportional income tax rate.

If two parties compete for votes by committing to provide some level of government expenditure g per person, what level will be chosen by the winning party? Explain briefly.

Explain briefly.