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

Monday August 13 2012
$7 - 9$ pm

Do **any 5** of the following 8 questions. All questions count equally.

1. Give an example, involving at least 3 voters, and at least 3 different alternatives, in which there is an alternative which is a Condorcet winner under pairwise majority rule, **but** in which this Condorcet winner is not the winner when the Borda count is used as the social choice rule.

2. Under what circumstances will some political party choose the median of voters' most–preferred policies as its platform in an election?

3. In the "probabilistic voting" model of political parties, which voters will have the most influence on parties' choice of policies? Explain briefly.

4. How much spending on public monuments should voters allow an elected official to undertake, in the following model of "retrospective voting"?

   Voters can observe exactly the amount r which the elected official spends on public monuments. Voters get no benefit at all from this spending. Voters can punish the elected official (after the fact) by coordinating on a voting strategy, and voting against an official who spends more on public monuments than voters allow.

   The elected official places a value $V = 80$ on getting re–elected. The official also places a value of $\sqrt{r}$ on the amount she spends on public monuments (so that the official's payoff is $\sqrt{r} + 80$ if she spends r dollars on public monuments and is re–elected, and $\sqrt{r}$ if she spends r dollars and is not re–elected). The largest possible amount of money which is available to be spent on public monuments is $10,000.

5. What level of service provision X and what budget B should a government official propose if she wants the largest budget B possible, in the following circumstances? The budget B she requests must cover the cost $C(X)$ of providing the service where

$$C(X) = X^2$$

She can propose any service level X and budget B which she wishes (provided that $B \geq C(X)$). However, the proposal must pass a referendum of the voters.

If the proposal does not pass, the budget will be 100, and the level of service provision will be 10.

All voters are identical, and each voter gets a total benefit of

$$W(X) = 100X - X^2$$

from a public service level X, and cares only about his total benefits $W(X)$, minus the budget B which is financed from his taxes.

6. Suppose that there are three voters in a legislature. Suppose as well that each of the three voters has single–peaked preferences over the possible alternatives.

The three legislators are L, with the furthest–left preferred policy, M with the median of the preferred policies and R with the furthest–right preferred policy.

The legislature's rules allow **up to two** different proposals, with a very specific agenda. The rules of the legislature are : (1) R is chosen to make an initial proposal ; (2) if this initial proposal passes, it becomes the law, and nothing more happens ; (3) if the initial proposal (by R) is defeated, then M gets a chance to make a proposal ; (4) if M's proposal passes (after the initial proposal has been defeated), then M's proposal becomes the law, and nothing more happens ; (5) if M's proposal is defeated (after the initial proposal has been defeated), then a "reversion policy" is adapted, and nothing more happens. The reversion policy is somewhere between M's most–preferred policy and R's most–preferred policy. A proposal requires a simple majority of the three votes in order to pass.

What would happen in this legislature, (if all 3 legislators knew the rules just enumerated)?

7. Under what circumstances would everyone agree that responsibility for some government service should be given to the national government, rather than to provincial or local governments?

8. "If spending in each district is decided by a national legislature, and is funded by broad–based taxes paid by residents of all districts, then the legislature will choose an inefficiently high level of spending in every district." True, false or uncertain? Explain briefly.