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

April 21 2015
2- 4 pm

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

1. For the following profile of people's rankings of 5 different alternatives, what would be the overall rankings of the alternatives under **each** of the following 3 decision rules : (1) "plurality" rule, in which alternatives are ranked by the number of first–place votes they get ; (2) the Borda count ; (3) a rule in which alternatives are ranked in **reverse** order of how many last–place votes they get. [In the table, there are 6 people whose rankings correspond to the first column, 7 people whose rankings correspond to the second column, and so on.]

	[6 people]	[7 people]	[8 people]	[9 people]	[10 people]
first choice	y	y	x	v	w
second choice	z	z	z	w	z
third choice	w	x	y	z	x
fourth choice	v	w	v	x	v
fifth choice	x	v	w	y	y

2. What (if any) is the relationship between the "Independence of Irrelevant Alternatives" axiom, and the notion of a decision rule being "strategy–proof"?

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 personal travel 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 personal travel. Voters get no benefit at all from this spending, and care only about minimizing the amount of money which elected officials spend on personal travel. Voters can punish the elected official (after the fact) by coordinating on a voting strategy, and voting against an official who spends more on personal travel than voters allow.

   The elected official places a value $V = 5$ on getting re–elected. The official also places a value of $\sqrt{r}$ on the amount she spends on personal travel (so that the official's payoff is $\sqrt{r} + 5$ if she spends r dollars on personal travel and is re–elected, and $\sqrt{r}$ if she spends r dollars and is not re–elected). The largest possible amount of money which can be used for personal travel is 100.

continued

5. Suppose that only one person, a senior government official, has the power to formulate a budget proposal for some government department. Suppose as well that this budget still must be approved by an elected legislature, after the official proposes it.

   How much power does the official have to expand the size of the department? Explain briefly.

6. How much spending could a committee chair allocate to her own district, if the committee has a fixed amount of money to be divided among many districts?

   Explain how sensitive your answer is to (1) the number of legislators in the committee ; (2) the likelihood that the chair will retain her position if the bill she proposes is defeated ; (3) the percentage of the votes she needs in order to pass her bill.

7. Discuss the appropriate level for the provision of education in the following model : 3 local jurisdictions, or 1 national jurisdiction?

   All people have the same income preferences, represented by the utility function

   $$U(c, g) = cg$$

   where c is the person's after–tax income, and g is the per capita level of public education.

   There are 100 people with income 600, 100 people with income 3000, and 100 people with income 6000.

   The total cost of providing g units of the public good to each of N people is $300g$. This is a total cost : the cost per person is $300g/N$.

   People are perfectly mobile. The public good must be financed by a head tax. If the public good is provided at the national level, the quantity provided must be the same for everyone.

8. Do increases in the mobility of residents (among different jurisdictions) make the public sector more efficient, or less efficient? Explain briefly.

end