

Legislators bargain over the share of ministries in the cabinet using a closed rule, i.e. the party asked first to form a government makes a proposal regarding seat-sharing in the cabinet. If the proposal does not receive a majority another party is asked to form a government (with replacement) and so on. Let the probability that party 3 makes an offer to party 1 be zero and the common discount factor be 0.7. What is the probability that the two largest parties form the government if attention is restricted to stationary equilibria? 10

4. Suppose the utility of citizen i from policy g is given by $w^i(g) = -|g^i - g|$, where g^i is the ideal or bliss point of citizen i and g is the policy implemented. Let g^i be distributed uniformly over $[0, 1]$. Any citizen can enter as a candidate by incurring an entry cost $\varepsilon > 0$. Election is held among candidates who run for office. Each citizen maximizes his/her expected utility, *given how other citizens vote*. Pre-election commitments are not credible, elected candidate chooses her bliss point and a default policy $\bar{g} = 0$ is implemented if nobody runs for office. Let the number of citizens be odd with g^m representing the median's bliss point. Discuss two-candidate equilibria in the above model. 10

MASTER OF ARTS EXAMINATION, 2023

(2nd Year, 2nd Semester)

ECONOMICS

[NEW POLITICAL ECONOMY]

Time : Two Hours

Full Marks : 30

Answer any *three* of the following questions: 10×3=30

1. Consider an economy where the size of the population is normalized to unity and where agent i 's preferences over a public good y and private consumption c^i is defined by $w^i = c^i + \alpha^i V(y)$, where $V(\cdot)$ is concave and α^i is the intrinsic parameter of agent i that is drawn from distribution $F(\cdot)$ with mean at α . Each agent has one unit initial endowment of private good and the relative price of public and private good is one. To finance public good the government raises a per capita lump sum tax of q , so that agent i 's budget constraint becomes $c^i \leq 1 - q$. Suppose, first, two parties A and B announce policy platforms on q equal to q_A and q_B simultaneously and non-cooperatively, then elections are held and finally the elected party implements his announced policy (full commitment). The parties maximize expected exogenous (ego) rents from winning elections.
 - a) Derive the policy preferences of agents on the public good $W(q; \alpha^4)$ and also the socially optimal level of

[Turn over

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public good assuming a utilitarian social welfare function. 2.5

b) Assume $\alpha^i = \alpha \forall i$. What are the announced policy platforms and the candidates' probability of winning? 2.5

c) Suppose agents are heterogeneous. What are the announced policy platforms and the candidates' probability of winning? 2.5

d) Comment on the economic predictions of the model. 2.5

2. Consider the two-period economy where a politician knows his competence level before deciding on the rents he extracts. Suppose income tax rate is fixed at $\bar{\tau}$ and voters' preferences in period $t=1,2$ are $w_t = y(1-\bar{\tau}) + \alpha g$, where $\alpha \geq 1$ is an exogenous parameter and y denotes (uniform) income. Politician's problem is whether to use the tax revenues to provide public goods pleasing the voters, or to appropriate rents for themselves. The government budget is balanced every period, i.e. $gt = \eta(\bar{\tau}y - r_t)$, where $r_t \geq 0$ is the rent in period t and η , reflecting politician's competence, can take two values with equal probabilities $\left\{ \frac{1}{\theta}, \frac{1}{\lambda\theta} \right\}$, where $\lambda < 1$. The upper bound of rents is given by $r_t \leq \bar{r} < \bar{\tau}y$. The objective function of the incumbent politician in

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period 1 is $r_1 + p_I \beta(r_2 + R)$, where $\beta \in (0,1)$ is the discount factor and p_I is the probability that the incumbent is reelected. R denotes exogenous (ego) rents from holding office. Pre-election commitments are not credible. First, the incumbent chooses r_1 after observing the value of η . Next, g_1 is residually determined. Voters observe their utility, but neither r_1 nor η . Thereafter elections are held. If incumbent wins his competence remains η . Otherwise a contender with competence $\eta^c \in \left(\frac{1}{\theta}, \frac{1}{\lambda\theta} \right)$ is appointed. Finally, r_2 is set and the game ends.

a) Assume that if the politician's strategies do not reveal his competence voters are not willing to reelect him. Show that separating equilibria exist in which two types choose different strategies. 5

b) Assume now that voters are willing to reelect a politician even if his strategy does not reveal his competence. Show that pooling equilibria exist in which both types choose same strategy. 5

3. Consider a three-party legislature where the constituencies held by the parties are, respectively, 42%, 35% and 23%. The probability with which a party is called by the speaker to form a government are in proportion with the constituencies held by them.

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