Please answer all questions. Each question will be graded equally. You have three hours to complete the exam.

1. Consider an infinitely repeated game with 3 groups of voters $J = 1, 2, 3$ each of unit mass. Each group represents a district. Voters in district J have preferences $w^J = y - \tau + f^J + H(g)$ where f^J represent transfers to group J. The budget constraint is $3\tau = g + \sum_J f^J + \sum_l r^l$. In each period, the following is played: i) agenda-setters a_τ and a_g are chosen; ii) voters decide their reservation utilities $\bar{w}^J$ optimally conditional on the status of their legislator, iii) a_τ proposes tax rate τ,iv) Congress votes on τ. If it is rejected default $\bar{\tau} > 0$ is decided; v) a_g proposes g, $\{f^J\},\{r^l\}$ subject to the budget constraint given by the previous stage.; vi) Congress votes. If the proposal is rejected, the default is $g = 0$, $f^J = \tau - r^l$, $r^l = \bar{r}$. Voters observe the outcome and vote.

   (a) Construct a stationary equilibrium in this model in which $H_g = 1$.

   (b) Compute the continuation value for staying in office and the total rents of politicians.

2. Please explain in words the theory of democratization outlined by Acemoglu and Robinson. When does the elite extend the franchise voluntary? When does a revolution occur? When does the elite retain political control? Lizzeri and Persico have an alternate theory of democratization. Their theory is that the elite extended the franchise in order to reduce patronage . How would you test the Acemoglu and Robinson theory of democratization? What about the Lizzeri and Persico theory?

3. Consider a society with a continuum of citizens with income $y_i \, U[0, 2]$. Each citizen i has preferences over private consumption c and publicly provided private good g, given by
$$w^i = \sqrt{c^i} + \sqrt{g}.$$
Private consumption is $c^i = (1 - \tau)y^i$ and the government budget is $\tau y = g$, where y is average income.

   Consider the following timing: (1) Any citizen may enter as a political candidate at a cost of ϵ. (2) An election is held among the candidates: the candidate who gets plurality wins the election, and ties are determined by a coin toss. (3) The winning candidate selects a tax rate; if there are no candidates, then a default tax rate $\bar{\tau}$ is implemented.

(a) What policy would a winning candidate with income y^i implement?

(b) Suppose that $\epsilon = \sqrt{2} - \sqrt{3/4} - \sqrt{1/4}$. In what region must the status quo policy, $\bar{\tau}$, lie in order for the equilibrium with only the citizen with median income to exist? Do there exist other one-candidate equilibria?

(c) Characterize the two-candidate equilibria?

(d) Discuss the empirical evidence in support of the citizen candidate framework? Cite specific papers and discuss their strengths and weakness.

4. Discuss three channels by which the media can influence government policy? Be sure to cite specific theories and empirical studies in support of your answers. For at least two of the empirical papers, describe the data, research design, main findings, robustness, and any concerns with interpretation.