Part I. Consider an overlapping generations economy where all agents born at $t$ have utility function $U(c_{t1}, c_{t2}) = \log(c_{t1}) + \beta \log(c_{t2})$ and endowment $e_t = (e_1, e_2)$, with $e_j > 0$. The stock of fiat money grows at rate $\gamma$, so that $M_{t+1} = (1 + \gamma)M_t$.

1. Describe the set of nonmonetary equilibria.

2. Describe the set of monetary equilibria.

Part II. Consider a worker searching for a job who receives an i.i.d. offer $(w, \lambda)$ with probability $\alpha$ each period, where $w$ is the wage and $\lambda$ the probability of the job ending each period while employed. With probability $1 - \alpha$ he receives no offer. Assume an infinite horizon, a constant discount factor $\beta$, and a constant benefit to not working given by $b$. Also assume that quits are simply not allowed. Make other assumptions as you see fit.

1. Argue that the optimal strategy is to accept an offer iff $w \geq w^*(\lambda)$, and characterize the function $w^*(\lambda)$ as completely as you can.

2. Discuss the effect of an increase in $\alpha$. 


Part I. Consider an overlapping generations economy where all agents born at $t$ have utility function $U(c_{t1}, c_{t2}) = c_{t1} + \beta c_{t2}^{\theta}$, where $\theta$ and $\beta$ are parameters, and endowment $e_t = (e_1, e_2)$. The stock of fiat money is fixed and population grows at rate $\gamma$. Describe the set of equilibria. (Hint: Try to be careful with corner solutions.)

Part II. Describe as completely as you can Diamond’s search-equilibrium model and discuss how the set of steady state equilibria depends on returns to scale in the matching technology.