1. Carefully define a com etitive equilibrium for this economy. Characterize it using the agents' first-order conditions. Is the economy Pareto-o timal? (15)

2. State the Social Planner's roblem, and derive the first-order conditions. (15)

3. Do households work more, fewer, or just the same number of hours in the com etitive equilibrium com ared to the Planner's solution? (15)

4. Now assume that $u(c) = \log c$, $v(l) = 2l^2$, and that $k = \frac{1}{4}$ and $A = 2$. The government considers introducing a tax $_L$ on the households' labor income (which can be a subsidy if $_L < 0$). The government redistributes the tax revenue through a lum -sum transfer on households T (again ossibly negative). Can the government im lement the allocation from the Planner's solution? If yes, what level of $_L$ should be chosen? (15)