

Name: \_\_\_\_\_ Section: \_\_\_\_\_

Date assigned: Tuesday, 11/17

Date due: Friday, 11/20 (**Place in slot on my office door by 5 p.m.**)

## Instructions:

- This problem set has 4 questions, for a total of 35 points. The number of points for each question is indicated at the start of the question.
- Please solve the questions on separate pieces of paper that are to be turned in with your name written on top, **stapled**.

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### 1: (12 points total; 3 each)

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For each of the proposed reforms (i.e. changes) to the current Social Security system listed below, briefly discuss the pros and cons of the reform, paying attention in particular to efficiency implications (through potential behavioral responses to the change) and equity implications (who wins and who loses). Note that all reforms are intended to save the system money, so you do not need to list this as a benefit.

- (a) Increase the number of years used to calculate benefits from 35 to 40.
- (b) Reduce benefits for beneficiaries with high asset levels (wealth).
- (c) Add new state and local government workers to the pool of covered workers (i.e., they pay payroll taxes now and receive benefits when they are old).
- (d) Gradually increase the normal retirement age (NRA) from 65 to 70 (under current laws, the NRA will gradually rise to 67 by 2022; the proposal is to speed up this process so that the NRA will be 70 by 2022).

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### 2: (5 points)

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Lalaland is an extremely stable country with 200,000 residents, half of whom are young workers and half of whom are retirees. At the end of each “year,” the 100,000 retirees die, the 100,000 young workers retire, and 100,000 new young workers are born. Workers earn a total of \$5,000 for the year. Lalaland operates a “pay as you go” social security system, where each current worker is taxed \$2,500 and the revenue collected is used to pay a \$2,500 pension to each retiree. The neighboring country, Gogovia, is larger and more dynamic. Gogovia has an active stock market that Lalalandians can invest in and earn a 10% rate of return. It also has an active banking sector, which will gladly lend the Lalalandian government money, charging them 10% interest per year. Lalaland is considering moving to a system of personal accounts, where each Lalalander would take her \$2,500 and invest it in Gogovian markets (and earn a much higher rate of return!). The government would borrow \$250 million ( $\$2,500 \times 100,000$ ) from Gogovian bankers to pay for current retirees. It would then tax retirees each year just enough to pay the interest on this debt. Would this new system be better or worse for Lalaland?

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**3: (5 points)**

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Suppose there are two types of people in the country of Dipolia: unskilled people who value only food and skilled, lazy people who value only alcoholic drinks. The government of Dipolia is considering moving from a cash-welfare system to a food stamps system. The new system will provide the same benefit levels, but recipients will get stamps allowing them to buy food instead of cash. Explain how this change will affect the work efforts and utility levels of the two types of people in Dipolia. How would your answer differ if unskilled people valued both food and alcoholic drinks?

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**4: (9 points; 3 points each)**

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An individual can earn \$12 per hour if he or she works. Draw the budget constraints that show the monthly consumption–leisure trade-off under the following three welfare programs. In each graph, assume that a person can work at most 24 hours per day times 30 per month for 12 months.

- (a) The government guarantees \$600 per month in income and reduces the benefit by \$1 for each \$1 of labor income.
- (b) The government guarantees \$300 per month in income and reduces that benefit by \$1 for every \$3 of labor income.
- (c) The government guarantees \$900 per month in income and reduces that benefit by \$1 for every \$2 in labor income, until the benefit reaches \$300 per month. After that point, the government does not reduce the benefit at all.

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**5: (4 points)**

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The U.S. federal government definition of poverty is the same in all communities around the country. Is this appropriate? Why or why not?