

Write your name on the cover of the test booklet and nowhere else. Enclose this sheet with the booklet. Failure to follow these directions will cost you 1 point. The test has 150 points (to be scaled up to 210 points) and is scheduled to take 75 minutes. Therefore, expect to spend 1 minute for every 2 points. For example, a 12-point question should take 6 minutes. I can give extra time but not much.

1) (12 points) Answer EITHER Part A OR Part B.

A) Give an example of structural unemployment and an example of cyclical unemployment. Explain why they fit their respective categories.

B) Suppose an economy had 500 people of working age. 270 people have jobs. 30 people do not have jobs but are looking for a job. 20 people do not have jobs, but have quit looking for a job. The remaining 180 people are not employed and are not looking for a job because they are a stay-at-home parent. Calculate the labor force participation rate and the unemployment rate. Show all work and briefly explain why you chose the numbers you used.

2) (12 points each) Answer TWO of the following parts.

A) For both NX and NFP, tell me how we calculate that statistic. In other words, if you subtract apples from oranges, tell me why we subtract that way rather than subtracting oranges from apples.

B) Suppose your rich uncle bought a new Rolls Royce (which is only made in England). The dealership bought the car from the company for \$120,000 and you paid the dealership \$130,000. What happens to GDP? Explain your logic mentioning which part(s) of GDP are affected and why you chose them.

C) Suppose you bought \$500 worth of Facebook and paid a commission of \$10. How much did GDP go up? Explain your logic mentioning which part(s) of GDP are affected and why you chose them.

3) (14 points) Answer EITHER Part A OR Part B.

A) Suppose I gave you NI and I asked you to calculate PI. What other information would I have to give you? Explain why those statistics are added and subtracted.

B) What are the three ways to calculate GDP? Explain why two of them should give the same result.

4) (14 points) Explain  $r_{a-t} = \frac{(1-t) * i - \pi}{1 + \pi}$  including both  $\pi$  OR  $y = b_p y_p + b_T y_T$  including giving estimates for  $b_p$  and  $b_T$ .

5) (14 points) Answer EITHER Part A OR Part B.

A) The book says that a tax cut will either cause total national savings to decrease or be unchanged. Explain both results. Which do you think is more likely? Explain your logic.

B) Explain the difference between stocks and flows. Use savings and wealth as examples.

6) (18 points) Answer EITHER Part A OR Part B.

A) During 2008 and early 2009, the stock market lost about 53% of its value. Illustrate the effects of that on the inter-temporal budget constraint. Explain why the curve moved as drawn. What happens to the private savings ( $S_{pVT}$ ) as a result of this? Explain your logic.

B) Draw the inter-temporal budget constraint. Illustrate the effects of a decrease in the interest rates. Explain why the curve moved as drawn.

7) (20 points) Answer EITHER Part A OR Part B.

A) Draw the graph for the Life-Cycle Model. Use it to explain how much economic stimulation will occur from a temporary tax cut (like what Congress is debating now). Explain why it has that effect.

B) The Life-Cycle Model can be caused problems by durable goods. Explain why durable goods could make the predictions of the model be inaccurate.

8) (34 points) Answer EITHER Part A OR Part B.

A) Draw the production function as a function of labor and draw the supply and demand for labor.

Illustrate the effects of an improvement in technology on both graphs. Explain why the curve(s) moved as drawn. What happens to the real wage, the number of people employed, and the level of GDP?

B) It is fairly obvious to most people, the government will increase the income tax in the future. Draw the supply and demand for labor. Draw the effects of the belief that taxes will go up in the future.

Explain why the curve(s) moved as drawn. What happens to the real wage and number of people employed? How would your answer be different if the income tax rates were to go up now rather than in the future? Draw that effect too. Explain your logic.