

Do NOT write your name anywhere. (Canvas will tell me who turned in the exam.) Take pictures of your answers and use your own software or <https://pdfcandy.com/> to create a PDF for each answer which requires an upload. If it is large, resize it to 8.5" x 11" or A4. Upload that to Canvas. Upload each answer as a separate file with that question. Failure to follow directions will cost you one point. People with Apple products may need to use CamScanner app.

You are not allowed to use your books, notes, the internet, or other people when taking this test. You can use the internet to access Canvas and to convert your answers to PDF files. Nothing else.

If you run out of time or lose your internet connection, you can do a second submission. You do NOT have to redo the questions you already did. I will be able to see every submission. If you have problems, you can always contact me via Zoom or e-mail. If you use Zoom, open it in a new tab or window.

Failure to follow these directions will cost you 1 point. The test has 100 points (to be scaled up to 160 points) and is scheduled to take 50 minutes. Therefore, expect to spend 1 minute for every 2 points. For example, a 12-point question should take 6 minutes. I have it set up to only give you an hour and a half.

1) (10 points) Answer EITHER Part A OR Part B.

A) Explain why the income method of calculating GDP should give the same answer as the expenditure method.

B) Developing countries complain that GDP calculations systematically undervalue their production. Give two reasons why this is true.

2) (10 points) Answer EITHER Part A OR Part B.

A) Suppose your bank account pays 10% interest. Approximately how many years would it take to double? If it returned 5%, then approximately how many years would it take to double. Show all calculations.

B) Why is saving important for economic growth? In other words, how can increased saving now lead to an increase in the GDP at full employment in the future?

3) (12 points) When we first calculated the government spending multiplier, we implicitly made multiple assumptions. For EITHER tax revenue OR imports, what did we assume about that variable? If we relax the assumption, then what will that do to the size of the government spending multiplier? Explain your logic.

4) (14 points) Answer EITHER Part A OR Part B.

A) Suppose a person has a consumption function of $C = 500 + .7(Y-T)$. If their disposable income is \$20,000.00, then how much are their MPC, APC, MPS, and APS. Show all work. If there is no work, then state how you got the answer.

B) Suppose that the MPC is .8. How much is the government spending multiplier? Show all work. If the government wanted to increase GDP by \$1000, then how much would they have to spend to get that result? Show all work.

5) (14 points) For EITHER *limiting protectionism* OR *creative destruction*, explain what that means and how it helps economic growth.

6) (20 points) Answer EITHER Part A OR Part B.

A) Draw the 45° diagram, a.k.a. the Keynesian Cross diagram. Illustrate the effects of an increase in government spending. Explain why the curve(s) moved as drawn. Given your diagram, approximately, how big is the government spending multiplier? Briefly explain how you got that value.

B) Draw the 45° diagram, a.k.a. the Keynesian Cross diagram. Illustrate the effects of an increase in the marginal propensity to save. Explain why the curve(s) moved as drawn.

7) (20 points) Answer EITHER Part A OR Part B. Both use the following data. If you need some data

not given, assume it is zero. Consumers spent \$2000. Firms added \$500 worth of new buildings. The government spent \$800 on salaries, \$100 on subsidies to firms, and \$200 on Social Security payments. We exported \$150 worth of goods and imported \$250 worth of goods. Machines wore out by \$50. Businesses paid \$20 worth of profit taxes and \$120 worth of sales tax while keeping \$20 of retained earnings.. People pay \$700 in income tax. **Write out the equation for each calculation with words. Rewrite it with the numbers in it. Then give me the total.**

A) Calculate GDP, NDP, and NI

B) Assume the answers in Part A were $GDP = \$4000$, $NDP = \$3800$, and $NI = \$3500$. Use those values and the information above to calculate PI and DPI. (Those are not the correct answers to Part A, but assume they are correct.)