

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 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) All statistics have problems which make the statistic less useful than we would like. For EITHER the unemployment rate OR the inflation rate, what are two problems with the calculation of the statistic which make it less useful than we would like.? Explain your logic.

2) (12 points) Answer EITHER Part A OR Part B.

A) What are two problems caused by high inflation? Explain how high inflation causes them.

B) What are two problems caused by high unemployment? Explain how high unemployment causes them.

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

A) What does *promoting competition* mean? Explain why that is an economic reason for a government.

B) What are *positive externalities*? Without drawing a graph, explain why they mean that the government should intervene in the market. You do NOT need to explain how economists say to solve the problem.

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

A) Explain why in general, increasing the tax rate could cause a decrease in tax revenue. Make sure your explanation applies to any tax. Give a numerical example of an excise tax where increasing the tax rate caused the tax revenue to decrease. (A graph is not a numerical example, that is why I am having you type this answer rather than write the answer and photograph it.)

B) A student in another class found a webpage which says that sales taxes are regressive – which I have said for decades. Explain their logic.

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

A) Suppose that at the beginning of the year the CPI is 900 and the expected inflation rate is 5%. At the end of the year, the CPI was 918. What was the inflation rate? Show all work. Name two groups of people who are hurt by the inflation. Explain why they are hurt.

B) Suppose a country has 1000 people who are 16 or older. 630 people have jobs. 70 people do not have jobs but are looking for a job. 50 people do not have jobs and have quit looking. The remaining 250 are retired. Calculate the labor force participation rate and the unemployment rate. Show all work and briefly explain what you did.

6) (16 points) Answer EITHER Part A OR Part B.

A) Suppose there is a project which will cost \$2000. It will enable the organization who does the project to sell 1 item to each of 500 people at \$3 profit per item. There is a negative externality which affects 100 people and it costs each of them \$2 each. Should the project be done? Explain your logic. Would

the market provide it? Explain your logic. Would the government provide it? Explain your logic.

B) Suppose there is a project which will cost \$3000. It will enable the organization who does the project to sell 1 item to each of 800 people at \$5 profit per item. There is a negative externality which affects 900 people and it costs each of them \$1 each. Should the project be done? Explain your logic. Would the market provide it? Explain your logic. Would the government provide it? Explain your logic.

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

A) What is the long-term problem facing Social Security? What long-term trends mean the problem will be getting worse for quite a while more? One way to reduce the problem is to remove the cap on income subject to the Social Security tax. How would that reduce the problem? If you were President of the USA, would you use this as part of your plan to save Social Security? Explain your logic.

B) What is the long-term problem facing Social Security? What long-term trends mean the problem will be getting worse for quite a while more? One way to reduce the problem is to increase the retirement age. How would that reduce the problem? If you were President of the USA, would you use this as part of your plan to save Social Security? Explain your logic.