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 cannot give extra time because I have a meeting after your class.

1) (10 points) For EITHER *providing an economic system* OR *promoting competition*, explain what that means and why we need a government to do that.

2) (12 points) Answer EITHER Part A OR Part B.
A) On the review sheet, I gave you some statistics which showed that if you saved for 40 years, you could save half as much per month as you would if you saved for 30 years. What are the two reasons for that?
B) What are two of the problems caused by faster economic growth? Explain how the growth causes that.

3) (12 points) For EITHER the event in Part A OR the event in Part B, determine how much GDP changed. Tell me which part of GDP changed and why you chose it. If you do not use a number, tell me why you did not use it.
A) You sell your car to a used car dealer for $1000 and they sell it to somebody else for $1500.
B) You sell $10,000 worth of stock and pay $5 in commissions.

4) (14 points) Answer EITHER Part A OR Part B.
A) Suppose at the start of the year, the CPI was 900 and the expected inflation rate was 12%. At the end of the year, the CPI was 990. What was the inflation rate? Show all work. Name two groups of people who were hurt by the inflation. Explain why they were hurt.
B) A large number of people got laid off in 2020. Which type of unemployment is that? Explain your language. Before somebody becomes a discouraged worker, what type of unemployment were they most likely to be? Explain your logic.

5) (14 points) All statistics have problems with the definition which makes it hard to calculate, thus less useful than we would like. For EITHER the unemployment rate OR the inflation rate what are TWO problems with the definition? Explain your logic.

6) (16 points) Answer EITHER Part A OR Part B.
A) How can increasing a tax rate cause the tax revenue to decrease? Explain your logic in a general method which will apply to all taxes.
B) Suppose a person is earning $30,000 this year and facing the tax table to the right. Calculate their marginal tax rate, total taxes paid, and average tax rate. Show all work. If there is no work, briefly state how you reached each conclusion.

Income Bracket	Tax Rate
$0 - $10,000	5%
$10,000 - $40,000	20%
$40,000 - $70,000	25%
$70,000 - $100,000	30%
>$100,000	35%

7) (16 points) Answer EITHER Part A OR Part B.

A) The market has an advantage over voting for some consumers in some situations. Given an example and explain how the market is better for some consumers. Voting is better for some consumers in some situations. Give an example and explain how the voting is better for some consumers.
B) Suppose a factory costs $1000 to build. It will be able to make 500 items which can be sold for a profit of $3 per unit. (Assume each item is sold to a different person). The factory will affect 400 people negatively, hurting each person $2 each. Should the factory be built? Will the industry do it? Would the government do it? For all three parts, show all work and explain how you reached the conclusion.

8) (16 points) Answer EITHER Part A OR Part B.
A) What are the *expenditure method* and the *income method* of calculating GDP? Explain why they should give the same result.
B) When comparing GDP across countries, we run into two problems. The first is that the currencies are different. The second is that the populations are different. Explain how we solve those two problems.

9) (18 points) Answer EITHER Part A OR Part B.
A) Use the following data to calculate the labor force participation rate and the unemployment rate. Show all work and briefly explain what you did. Suppose a country has 1000 people over the age of 16. 630 people have jobs. 70 people do not have jobs and are looking for a job. There are 100 retired people. 60 people are stay-at-home parents. And the remaining 40 people would like a job, but have quit looking for a job.
B) We calculated GDP, NDP, NI, PI, and DPI. For THREE of the following statistics, tell me at which point in calculations that is used, how it is used, and why it used there. For example, if I asked about personal income tax, you could say,"We subtract personal income tax when going from PI (personal income) to DPI (disposable personal income) because that is income people get (PI), but they cannot spend it (DPI). There is $500 of wear-and-tear on machines. The government pays $1000 in Social Security payments to retired people. Companies kept $700 in retained earnings. We imported $900 worth of goods.

10) (22 points) Answer EITHER Part A OR Part B.
A) What are the two long-term trends which will cause the Social Security Trust Fund to run out of money? Explain how they will have that effect. One proposal to save Social Security, is to *means test benefits*. What does that mean? How would that reduce the problem? If you were the President, would you include that as part of a package to save Social Security? Explain your logic.
B) What are the two long-term trends which will cause the Social Security Trust Fund to run out of money? Explain how they will have that effect. One proposal to save Social Security, is to increase the Social Security tax rate. How would that reduce the problem? If you were the President, would you include that as part of a package to save Social Security? Explain your logic.