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 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 cannot give extra time because some students have a class after your class.

1) (8 points each) For TWO of the following events, tell me how much GDP changes. If it does not change, then tell me why it does not. If it does change, then tell me which part of GDP changes and why you chose that part.
A) You buy a $10 Chinese made hat.
B) I pay you $50 to shovel my driveway.
C) You buy a used car for $6000 which cost the dealer $4000.
D) President Obama's monthly paycheck of about $33,000.
E) A friend of yours gets an unemployment check for $300.

2) (10 points) Answer EITHER Part A OR Part B.
A) Why isn't the unemployment rate at full employment equal to 0%? Explain your logic.
B) All statistics, especially in macroeconomics, have problems with their calculations which means the statistic is not as useful as we would want it to be. What is one problem with calculating the inflation rate using CPI? Explain your logic.

3) (10 points) For EITHER a *public good* OR *providing a legal system*, explain why it is an economic reason for having a government.

4) (10 points) Answer EITHER Part A OR Part B.
A) Explain why I feel most sales taxes are regressive.
B) When we draw a steep supply curve and a flat demand curve, we conclude that the firm pays most of that tax. Who is actually paying the firm's share of the tax? Explain your logic.

5) (12 points) Answer EITHER Part A OR Part B.
A) Suppose people expected 5% inflation. At the beginning of the year the CPI was at 800 and at the end of the year it was at 832. How much was the inflation rate? Show all work. Name two groups of people hurt by the inflation. Explain how they are hurt.
B) Suppose there are 1000 people of working age in a country. 500 of them are employed. 400 are stay at home parents. 50 of them are not employed but are looking for jobs. 30 of them used to be employed, but are no longer employed and quit looking for a job. 20 people are in jail. Calculate the labor force participation rate and the unemployment rate. Show all work and **briefly** explain how you determined who to include and who not to include.

6) (20 points) Answer EITHER Part A OR Part B.
A) What is the long-term problem with Social Security? What are the two main causes of the problem? One possible solution to the problem is to raise the Social Security tax on everybody. Explain how this will reduce the problem. Would you use the method (either with or without other solutions) to reduce the problem? Explain your logic.
B) What is the long-term problem with Social Security? What are the two main causes of the problem? One possible solution to the problem is to means test benefits Explain how this will reduce the problem. Would you use the method (either with or without other solutions) to reduce the problem? Explain your logic.

7) (22 points) For EITHER *a negative externality* OR *a positive externality*, give me an example of it. Use the S/D diagram to prove that the market will not supply the socially optimal level of production. How do economists say the problem should be solved? Use your graph to show how that solution would result in the socially optimal level of production. Explain why the curve(s) moved as drawn and explain the economics as to why the socially optimal level is achieved.