First Exam

Write all answers in your blue book and show all work there.  Return your exam in your blue book.

10 pts.

1)  Under what circumstances will a sales tax be passed entirely on to consumers?  Draw a diagram of this.

12 pts.

2)  Suppose that demand is $Q_D = 200 - 2P$ and supply is $Q_S = -90 + P$ and there is a 10 dollar sales tax.

What is the market price, the price to the buyer and the price to seller?
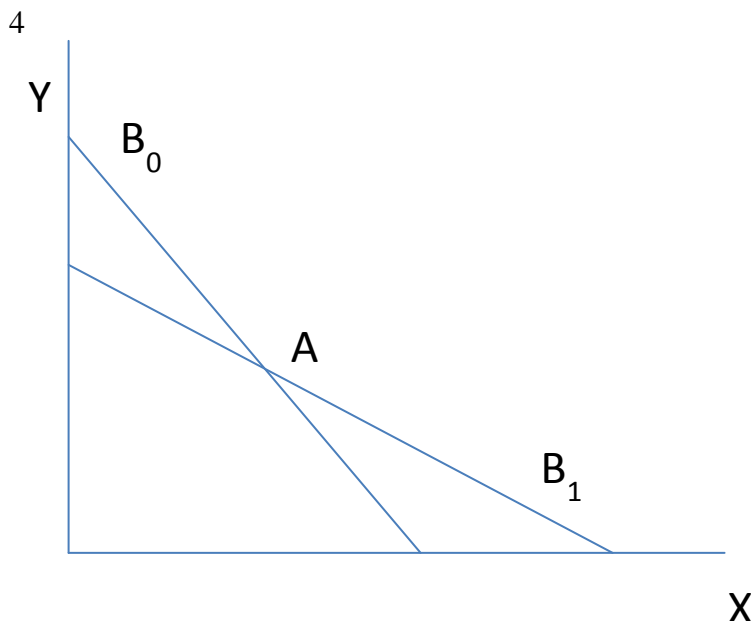
18 pts.

3)  This table shows hours needed to produce goods 1 and 2.

|        | Hours per job | |
|--------|-----|-----|
|        | G1  | G2  |
| Casey  | 10  | 20  |
| Tony   | 5   | 15  |

a)  Can Casey and Tony specialize and trade and both benefit?  Why?

b)  Find the opportunity costs and suggest a price for the trade.

c)  At this price, show that they both benefit from trade or not.

16 pts.

4

Suppose that prices change so that the budget line shifts from $B_0$ to $B_1$ and that initially utility is maximized at point A.

a) What will happen to real income if the Laspreyes method is used?

b) What will happen to utility? Sketch such a diagram and say if consumption of X will go up or down.

18 pts

5)  a)  Draw a well-labeled diagram where the price of X and income change but the level of utility doesn't change.  What kind of "effect" have you just illustrated?

b)  Add a second diagram where you sketch a demand curve that goes with the part a changes.  Is a compensated or uncompensated demand curve?  Why?

14 pts.

6)  Suppose that $Y = 9 + 5X - X^2 + .25X^3$

a)  Find Y'.

b)  Find Y''

c)  Use parts a and b to draw a well-labeled diagram of the function..

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12 pts.

7) a)  Suppose $Y = 10XZ$ and $Z = f(X)$, find dY/dX.

b)  Suppose $Y = Z^2$ and $Z = f(X)$, find dY/dX.

I have neither given nor received unfair aid on this test.

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