Econ 3144 – Fall 2001   Name_____

Test 2 – Rupp – Essay Questions (50 points) & 25 Multiple Choice Questions (50 points)

Note the following formula maybe helpful in this exam: $E_P = (P/Q) * (1/slope)$.

1. Madison has $10 to spend on beer and pizza. Beer costs $1 per bottle and pizza costs $2 a slice.

    a. Graph Madison's budget line with beer on the vertical and pizza on the horizontal axis. (4 points)

    b. Suppose Madison consumes 6 beers and 2 slices of pizza. At this point her MRS of beer for pizza is 3. Label this point "A" on your budget line above. Draw a convex (typical shape) indifference curve labeled "I_1" through point "A" (3 points)

    c. What can Madison do to improve her satisfaction level? In the graph above, show the best possible bundle labeled "B" that she can afford and the indifference curve labeled "I_2" for this bundle. (3 points)

2. Courtney likes to buy shoes. She will only buy shoes if she can find a matching left and right shoe. Label the horizontal axis "Left Shoes" and the vertical axis "Right Shoes" and draw three indifference curves labeled "I_1", "I_2", and "I_3" for Courtney where I_3 is most preferred & I_1 is least preferred. (5 pts)

3. Suppose Courtney in problem 2 has $100 in income to spend on shoes. Suppose left shoes cost $10 and right shoes cost $15. (3 points each)
    a. Graph this budget constraint on your graph for problem 2 and labeled it "Budget".
    b. Find Courtney's best affordable bundle of left and right shoes, label it "Z".

4. Draw 3 indifference curves labeled I$_1$, I$_2$, and I$_3$ (where I$_3$ is most preferred) in each of the following cases:

    a. You need 4 tires per car.

Tires

_____Cars

    b. You like both apples and pears.

Apples

_____Pears

    c. You like corn and you hate broccoli.

Broccoli

_____Corn

    d. Coke and Pepsi are perfect substitutes.

Coke

_____Pepsi

e. Mia budgets $18 per week for her morning espresso with cream. She likes it only if prepared with 4 ounces espresso and 1 ounce cream. Espresso costs $1 per oz, cream costs $0.50 per oz. How many ounces of espresso and cream does Mia buy per week? (5 points)

f. The market demand for tennis racquets is given by $P = 100 – 0.10Q$, where P is price in dollars per tennis racquet and Q is the number of tennis racquets purchased per day. If the price per tennis racquet is $75, answer the following questions: (5 points each)

   a. How much revenue will tennis racquets generate per day? (Show your work)

   b. What is the price elasticity of tennis racquets? (Show your work)

   c. To increase revenue, what should the tennis racquet seller do?

g. Professors Adams and Brown make up the entire demand side of the market for summer research assistants in the economics department. If Adam's demand curve is $P = 50 – 2Q_A$ and Brown's is $P = 50 – Q_B$, where Q_A and Q_B are the hours demanded by Adams and Brown, respectively, what is the market demand curve for research hours in the economics department? (5 points)

h. Consider the demand curve Q = 100 – 50P. (4 points each)
   a. Draw this demand curve below.
   b. What is the slope?

P

_____Q

Multiple Choice Section: 25 questions worth 2 points each. **Bubble in all answers on Scantron**. Write and bubble in (1) name and (2) social security number on Scantron.

Use the following information to answer the next 6 questions. Income is $1. Price of gum is 0.10 per stick and price of lollipops are 0.20 each. Graph the budget constraint in the space below:

Lollipops

_____Gum

1. Where does the budget constraint intersect the y-axis?
A) 0.2
B) 1
C) 2
D) 5
E) 10

2. Where does the budget constraint intersect the x-axis?
A) 0.1
B) 1
C) 2
D) 5
E) 10

3. What is the slope of the budget constraint?

A) 0.5
B) -0.2
C) -0.5
D) -2
E) 2

4. An increase in the price of gum will cause
A) an inward rotation of the budget curve.
B) an outward rotation of the budget curve.
C) an inward shift of the budget curve.
D) an outward shift of the budget curve.
E) no change in the budget curve.

5. If income doubles from $1 to $2 and no changes in the price of either good will cause
A) an inward rotation of the budget curve.
B) an outward rotation of the budget curve.
C) an inward shift of the budget curve.
D) an outward shift of the budget curve.
E) no change in the budget curve.

6. If the price of lollipops falls and everything else is unchanged will cause
A) an inward rotation of the budget curve.
B) an outward rotation of the budget curve.
C) an inward shift of the budget curve.
D) an outward shift of the budget curve.
E) no change in the budget curve.

7. This year the ECU men's basketball team beat Louisville. Louisville beat DePaul. DePaul beat ECU. This example shows that basketball games violate which preference assumption:
A) completeness
B) convexity
C) more is better
D) transitivity

8. The marginal rate of substitution is
A) the price of good x.
B) the tradeoff between the two goods under consideration at any particular point.
C) the total utility at that point.
D) the price of good y.
E) the relationship between the quantity of X consumed (on the horizontal axis) and income (on the vertical axis).

8. Excluding corner solutions, in consumer equilibrium, which of the following is true?
A) The marginal rate of substitution equals the slope of the budget constraint.
B) The indifference curve is tangent to the budget constraint.
C) The consumer is maximizing utility given the constraints.
D) All of the above are true.

9. True or False: Indifference curves never intersect.
A) True.
B) False.

10. The price consumption curve tells us the change in
A) consumer equilibrium as prices change.
B) income as prices change.
C) prices that one can expect given a change in consumption.
D) none of the above.

11. An Engel curve
A) always slopes up.
B) always slopes down.
C) may slope up or down.
D) will slope up first and then slope down for normal goods.

12. Price elasticity of demand is
A) the percentage change in quantity demanded divided by the percentage change in price.
B) the change in price.
C) the change in quantity over the change in price.
D) the change in price over the change in quantity.

13. If the demand for widgets is inelastic, revenues will _____ if the price of widgets increases.
A) increase
B) fall
C) remain the same
D) one cannot tell what will happen to revenues

14. Which of the following is likely to increase the elasticity of demand for a good?
A) an increase in the availability of close substitutes
B) a longer period of time
C) a larger share of income
D) all of the above

15. A vertical demand curve is
A) perfectly elastic.
B) perfectly inelastic.
C) unit elastic.
D) none of the above.

16. The cross-price elasticity of demand for complements is
A) positive.
B) negative.
C) zero.
D) infinite.

17. On the graph below, Suppose $M = \$100$, $P_Y = \$1$, $P_X = \$1$, what is the best affordable bundle?
   A) A
   B) B
   C) C
   D) D
   E) E

Good Y

100

23   46 50   100   Good X
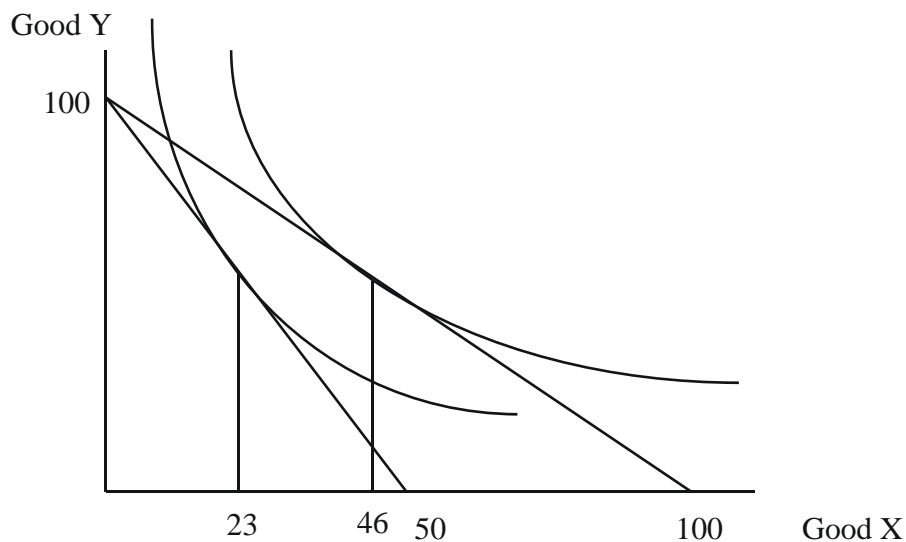
18. Suppose the price of X doubles to $P_X = \$2$. Everything else is unchanged. The total effect is represented by moving from point_____ to point_____.
   A) A to B
   B) B to A
   C) C to D
   D) D to A
   E) D to E

19. The substitution effect due to the price of X increasing is represented as the movement from point_____ to

point_____.
   A) D to B
   B) B to C
   C) A to B
   D) D to C
   E) E to A

20. The income effect due to the price of X increasing is represented as the movement from point_____ to point_____.
   A) A to D
   B) B to A
   C) C to D
   D) B to C
   E) E to A

21. A good is classified as inferior if:

   A)   consumers buy less when the price rises.
   B)   consumers buy less when income rises.
   C)   consumers buy less when the price falls.
   D)   consumers buy more when income rises.
   E)   better quality goods exist.

22. The owner of Krisy Kreme Donuts believes that if they raise the price per donut by 1 penny, total revenue will increase. What must the owner believe about the price elasticity of demand for donuts?

                  A) Demand is elastic
                  B) Demand is inelastic
                  C) Demand is unit elastic
                  D) Not enough information given

23. If a consumer's purchases of a product increases as income increases, this good is classified as a(n):

   a.   inferior good.
   b.   substitute good.
   c.   complementary good.
   d.   normal good.

24. Suppose the value of income elasticity of demand for a private college education is equal to 1.5. This means that:

a. every $1 increase in income provides an incentive for a $1.50 increase in expenditures on private college education.
b. every $1.50 increase in income provides an incentive for a $1 increase in expenditures on private college education.
c. a 10 percent increase in income causes a 15 percent increase in the quantity of private college education purchased.
d. a 15 percent increase in income causes a 10 percent increase in the quantity of private college education purchased.
e. a 10 percent decrease in private college tuition will have a large enough income effect to increase spending on private college education by 15 percent.

25. If the price elasticity of demand for football tickets is estimated to be -4.5, then a 10 percent increase in football ticket prices would cause a:

a. 4.5 percent decrease in quantity demanded.
b. 4.5 percent increase in quantity demanded.
c. 45 percent decrease in quantity demanded.
d. 45 percent increase in quantity demanded.
e. 450 percent increase in quantity demanded

Answer Key -- test2

1. D
2. B
3. A
4. B
5. C
6. E
7. C
8. D
9. A
10. A
11. C
12. A
13. A
14. D
15. B
16. B
17. D
18. D
19. A
20. B
21. B
22. B
23. D
24. C
25. C