Econ 3144 - Spring 2012 (Multiple Choice - 50 points, Discussion - 50 points)
Test 1 - Dr. Rupp
Name $\qquad$

Sign Pledge
"I have neither given nor received aid on this exam"

## Multiple Choice Questions

1. Karen has four daughters: Madison, Courtney, Jenna, and Meredith. She likes Madison and Courtney equally. She prefers Meredith to Jenna. She likes Madison more than Meredith. She also likes Jenna more than Courtney. Do Karen's preferences obey the Law of Transitivity?
A. Yes
B. No
2. The demand for ECU t-shirts is: $P=19-Q^{d}$ and supply of ECU $t$-shirts is: $P=3+Q^{s}$, find the equilibrium quantity of ECU $t$-shirts.
A. $\mathrm{Q}=11$
B. $\mathrm{Q}=16$
C. $\mathrm{Q}=8$
D. $\mathrm{Q}=22$
E. $\mathrm{Q}=12$
3. Find the equilibrium price of Nokia cell phones using the information from the previous question.
A. $\mathrm{P}=7$
B. $\mathrm{P}=15$
C. $P=16$
D. $P=11$
E. $P=8$
4. If there was a price floor of $\$ 10$ for ECU $t$-shirts, what would be the price?
A. $\mathrm{P}=10$
B. $\mathrm{P}=15$
C. $\mathrm{P}=9$
D. $\mathrm{P}=11$
E. $P=16$
5. If there was a price ceiling of $\$ 10$ for ECU $t$-shirts, how many $t$-shirts would be sold?
A. $\mathrm{Q}=10$
B. $\mathrm{Q}=7$
C. $\mathrm{Q}=9$
D. $\mathrm{Q}=8$
E. $\mathrm{Q}=12$
6. For most consumers, Hess and Sheetz gasoline are said to be:
A. Inferior goods
B. Giffen goods
C. Complementary goods
D. Substitute goods
E. Economic bads
7. The recent cruise ship accident has likely caused the following change in the market for cruise travel:
A. Decrease in quantity supplied
B. Decrease in quantity demanded
C. Decrease in supply
D. Decrease in demand
8. As you consume more and more donuts, what happens to your marginal benefit for donuts?
A. It increases
B. It decreases
C. It remains constant

Figure 1

9. Refer to Figure 1. Which point(s) are unobtainable?
a. A, B, C, E
b. A, B, D, E
c. A, C
d. B, E
e. D
10. Which bundle is preferred, bundle B or bundle E?
A. Bundle B
B. Bundle E
C. It depends on your preferences
11. The law of demand indicates:
A. if someone is willing to buy, then a seller is willing to supply it
B. if price goes up, people will buy less
C. if income goes up, people will buy more
D. if price goes up, sellers are willing to supply more

Figure 2

12. Refer to Figure 2. Which of the following would most likely have caused the production possibilities curve to shift outward from A to B?
a. an increase in resources necessary to produce capital goods
b. an improvement in the technology of producing consumer goods
c. an increase in the overall level of technology in the economy
d. an increase in unemployment
13. Which of the following assumption about preferences tells us that consumers prefer a mixture of goods rather than extremes?
a. Convexity
b. More-is-better
c. Concavity
d. Completeness
e. Transitivity
14. Which of the following assumption about preferences tells us that consumers have an opinion about two bundles?
a. Convexity
b. More-is-better
c. Concavity
d. Completeness
e. Transitivity

Figure 4

15. Refer to Figure 4 (previous page). If the government imposes a price floor at $\$ 8$, the result would be
a. a shortage of 20 units.
b. a surplus of 20 units.
c. a shortage of 40 units.
d. a surplus of 40 units.
e. neither a surplus nor a shortage.
16. Again, referring to Figure 4, if the price ceiling at $\$ 14$, what will be the quantity traded?
a. 30
b. 40
c. 50
d. 60
e. 70

Figure A


Figure B


Figure C

17. Jenna likes Tea. Jenna does not drink Coffee since she doesn’t like the flavor. Which of the above figures represent Jenna's preferences?
a. Figure A
b. Figure B
c. Figure C
d. Figure D

18. Meredith likes to creamer in her coffee. In fact, she'll only drink a cup of coffee if it has two creamers. Which of the above figures represent Meredith's preferences?
a. Figure E
b. Figure F
c. Figure G
d. Figure H
19. Which of the following indifference curves below reflects someone who likes both Cats and Dogs?
A. Figure I
B. Figure J
C. Figure K
D. Figure L

Figure I



Figure K
Figure L


20. Which of the following indifference curves below reflects people's preferences for nuclear waste and pizza?
A. Figure M
B. Figure N
C. Figure O
D. Figure $P$

Figure M


Figure N
Nuclear waste


Figure O
Nuclear waste $U_{1}$


Figure P


## Discussion Questions - 50 points

I. For most people, hot dogs and ketchup are consumed together. Show on a graph below, how a rise in the price of hot dogs affects the ketchup market. Clearly label all curves that you draw. Label the original equilibrium point "A" on your graph, and the new equilibrium (after the price of hot dogs rises) point "B". (6 points)

Ketchup market
Price

Quantity
A. What happens to the equilibrium price of Ketchup? (3 points)
B. What happens to the equilibrium quantity of Ketchup? (3 points)
II. Jenna likes apples twice as much as oranges.
A. (3 points) Write a utility function that is consistent with Jenna's preferences above: $\mathrm{U}=\mathrm{U}($ Apples, Oranges $)=$
B. (3 points) On a graph below draw three indifference curves for Jenna where $U_{3}$ is preferred to $U_{2}$ which is preferred to $\mathrm{U}_{1}$ (5 points)

Apples
|roranges
C. (3 points) Jenna earns $\$ 12$ per week. If apples cost $\$ 1.00$ and oranges cost $\$ 0.60$, use a dotted-line (-----) to draw Jenna's budget constraint.
D. (3 points) Find Jenna's optimal bundle of apples and oranges. Show this optimal bundle on the above graph. Label it "optimal".
III. Dennis earns $\$ 160$ per week. He spends money on two goods: Pepperoni Pizzas (\$5 each) and Diet Cokes (\$4) per 12-pack.
A. Sketch Dennis' budget constraint with Pepperoni Pizza on the vertical axis and Diet Cokes on the horizontal (3 points). (Make sure you indicate the $x$ and $y$-intercepts on your graph)

Pepperoni Pizza

B. What is the equation of Dennis' budget constraint that you just sketched in (A)? (3 points)
C. What is the slope of the budget constraint? (3 points)
D. What is the opportunity cost of a Diet Coke for Dennis? (3 points)
E. Use a dotted line (------) to draw a new budget constraint if Diet Cokes price drops to $\$ 3$ per 12-pack. Label this "new budget" (2 points)
4. The price of lollipops is $\$ 0.25$. The price of gum is $\$ 0.10$. Madison purchases 10 gums and 8 lollipops. She is willing to trade 3 gums for another lollipop. Her income is $\$ 3$.
A. Use a dotted line (-------) to indicate her budget constraint. Label her initial bundle "A" on your graph. (3 points)

Gum
B. What is the slope of the budget constraint? (2 points)
C. At gum $=10 \&$ lollipops $=8$, what is the MRS for Madison? ( 2 points)
D. Is bundle "A" the optimal bundle for Madison? (2 points)
E.If bundle "A" is the optimal, explain why it is the optimal. If bundle "A" is not the optimal, what can Madison do to increase her utility? (3 points)

Extra Credit (+3 points): In order to be eligible to answer the extra credit question, you must satisfy two criteria:

1. Your cell phone has not run during class.
2. You are taking this test during the normal day and time.

The U.S. has spent more than $\$ 800$ billion dollars on the Iraq war. In addition to the financial costs, 4,480 U.S. troops have lost their lives and there have been 654,965 Iraqi fatalities. Circle the country of Iraq on the attached map.

