Multiple Choice (3 points each)

1. Which of the following determinants of demand is most directly an indication of a consumer's utility for a good?
   A) Income.
   B) Tastes.
   C) Expectations of future prices.
   D) Other goods (availability and prices).

2. Marginal utility for a good is computed as:
   A) Total utility divided by quantity.
   B) Quantity divided by total utility.
   C) The change in quantity divided by total utility.
   D) The change in total utility divided by the change in quantity.

3. At some point during a meal each extra bite provides less and less additional satisfaction. This can be explained by:
   A) The law of demand.
   B) The law of diminishing marginal utility.
   C) The law of increasing opportunity cost.
   D) A shift in the demand curve.

4. Jose goes to an all-you-can-eat buffet at a Chinese restaurant and consumes three plates of food. He does not go back for a fourth plate of food because:
   A) The price of the fourth plate is too high.
   B) He has reached the point of increasing marginal utility.
   C) The marginal utility of the fourth plate would be zero or even negative.
   D) His total utility would increase with the fourth plate of food.

5. If marginal utility is negative, then:
   A) Total utility will increase with additional consumption.
   B) Total utility will decrease with additional consumption.
   C) The good or service being consumed is an inferior good.
   D) Total utility is at a minimum.

6. Total utility is maximized when:
   A) Price is less than marginal utility.
   B) Price is equal to marginal utility.
   C) Marginal utility is zero.
   D) Marginal utility is maximized.

7. If a good had a zero price (i.e. the good was free), a rational person would consume:
   A) An infinite amount of the good.
   B) The good until total utility was zero.
   C) The good until the marginal utility was maximized.
   D) The good until the marginal utility of the last unit was zero.
8. Suppose that Jason has allocated his entire budget to the purchase of apples and bananas. The marginal utility of the last apple purchased is 10 utils and each apple costs 10 cents. The marginal utility of the last banana purchased is 10 utils and each banana costs 5 cents. Brian should:
A) Select more apples and fewer bananas because he likes apples more than bananas.
B) Select more bananas and fewer apples because of the lower price for bananas.
C) Select more bananas and fewer apples because he gets more marginal utility per dollar from bananas.
D) Jason has made the choice that gives him the most total utility.

9. A consumer maximizes total utility from a given amount of income when the:
A) Marginal utility obtained from the last dollar spent on each good is the same.
B) Marginal utility of the last unit of each good is the same.
C) Total utility obtained from each product is the same.
D) Amount spent for each product is the same.

Complete Table 5.2. Then use the information in the table to answer the indicated questions.
Note: Do fill in the table; it is worth extra credit!

Table 5.2
Utility schedule

<table>
<thead>
<tr>
<th>Quantity consumed</th>
<th>Total utility</th>
<th>Marginal utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>65</td>
<td></td>
</tr>
</tbody>
</table>

10. In Table 5.2, the marginal utility of the third unit is:
A) 13.
B) 60.
C) 5.
D) 22.

11. In Table 5.2, the total utility when two units are consumed is:
A) 25.
B) 22.
C) 47.
D) 60.
Post-Quiz 7  

Demand-Utility Maximization

Complete Table 5.5. Then use the information in the table to answer the indicated questions. Assume the price of cola is $4 per unit and the price of pretzels is $2 per unit. **Note: Do fill in the table; it is worth extra credit!**

### Table 5.5
Michael's utility schedule

<table>
<thead>
<tr>
<th>Units of cola</th>
<th>TU of cola</th>
<th>MU of cola</th>
<th>Units of pretzels</th>
<th>TU of pretzels</th>
<th>MU of pretzels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40</td>
<td>40</td>
<td>1</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>32</td>
<td>2</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>96</td>
<td>24</td>
<td>3</td>
<td>66</td>
<td>16</td>
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</tr>
<tr>
<td>5</td>
<td>124</td>
<td></td>
<td>5</td>
<td>84</td>
<td></td>
</tr>
</tbody>
</table>

12. Refer to Table 5.5. Suppose Michael has $8 to spend on cola and pretzels. What combination should he purchase in order to maximize his utility?
A) 2 colas and 2 pretzels.
B) No colas and 4 pretzels.
C) 1 cola and 2 pretzels.
D) 2 colas and no pretzels.

13. Refer to Table 5.5. If Michael has $8 to spend on cola and pretzels, what is his maximum utility?
A) 72.
B) 78.
C) 90.
D) 138.

14. Refer to Table 5.5. If Michael has $14 to spend on cola and pretzels, what combination should he purchase in order to maximize his utility?
A) 2 colas and 3 pretzels.
B) 1 cola and 5 pretzels.
C) 3 colas and 1 pretzel.
D) 2 colas and 2 pretzels.

15. Which of the following is used to depict alternative combinations of goods that are equally satisfying?
A) An indifference map.
B) An indifference curve.
C) A demand curve.
D) A budget constraint.

16. A budget line represents:
A) The combinations of goods giving equal utility to a consumer.
B) The demand curve.
C) Combinations of two goods which can be purchased with a given budget.
D) The amount of income that is required to purchase a given amount of a good.
17. The point where the budget line and an indifference curve are tangent:
   A) Represents an optimal consumption point.
   B) Indicates the quantity and price that would appear on a demand curve.
   C) Indicates that the relative marginal utilities of the goods equal their relative prices.
   D) All of the above.

18. The slope of the budget constraint, when a consumer has reached optimal consumption of two goods, is equal to the:
   A) Marginal rate of substitution.
   B) Ratio of the prices of the two goods.
   C) Ratio of the marginal utilities of the two goods.
   D) All of the above.

Use the indifference curves and budget lines in Figure 5.8 to answer the indicated questions. Assume the price of $Y$ is $3 per unit.

**Figure 5.8**

19. The income per period available to the consumer depicted in Figure 5.8 is:
   A) $30.
   B) $60.
   C) $42.
   D) $90.
20. Refer to Figure 5.8. If the price per unit of good $X$ is $9, the consumer would maximize utility at point:
   A) $A$.
   B) $B$.
   C) $C$.
   D) $D$.

21. Refer to Figure 5.8. If the price per unit of good $X$ is $3, the combination which yields the most satisfaction is:
   A) 20 units of $X$ and 10 units of $Y$.
   B) 15 units of $X$ and 15 units of $Y$.
   C) 5 units of $X$ and 25 units of $Y$.
   D) 3 units of $X$ and 21 units of $Y$.

22. If a consumer is initially in equilibrium, an increase in money income will:
   A) Move him to a new equilibrium on a lower indifference curve.
   B) Make his indifference curves steeper, but will not alter the equilibrium position.
   C) Have no effect on the equilibrium position because product prices have not changed.
   D) Move him to a new equilibrium on a higher indifference curve.

23. Refer to the budget line shown in the diagram above. If the consumer's money income is $20, the:
   A) Prices of C and D cannot be determined.
   B) Price of C is $2 and the price of D is $4.
   C) Consumer can obtain a combination of 5 units of both C and D.
   D) Price of C is $4 and the price of D is $2.
24. The indifference curve in the above diagram yields Juan 100 units of utility. If Juan's money income were to increase by 20 percent, the indifference curve would:
   A) Shift leftward.
   B) Shift rightward.
   C) Become steeper.
   D) Not be affected.

25. Refer to the above diagram. If the budget line shifts from ab to ac the:
   A) Price of K has increased.
   B) Consumer's money income has fallen.
   C) Price of K has decreased.
   D) Price of J has increased.
Given the indifference map and budget constraint lines above, what is the demand curve for sweaters?

A) Graph A.
B) Graph B.
C) Graph C.
D) Graph D.
27. Given the indifference curves for an individual as shown above, if the price of good Y = $1, it can be determined that two points on his or her demand curve for good X are:
A) (PX = $1, QdX = 10); (PX = $2, QdX = 14).
B) (PX = $1, QdX = 7); (PX = $.50, QdX = 14).
C) (PX = $.50, QdX = 7); (PX = $1, QdX = 10).
D) (PX = $2, QdX = 20); (PX = $1, QdX = 10).

True/False (3 points each)

1. ___ Marginal utility represents the additional satisfaction obtained from one more unit of a good or service.
2. ___ The law of diminishing marginal utility does not apply to goods that a person really enjoys.
3. ___ If there is no budget constraint, utility maximization is achieved when marginal utility is zero.
4. ___ An indifference curve represents combinations of two goods which provide an individual the same total utility.
5. ___ The closer the indifference curve is to the origin, the more total utility it yields.
6. ___ Consumer equilibrium occurs where the budget line is tangent to an indifference curve.
7. ___ A rational consumer will try to get on the highest indifference curve that his or her income will permit.
8. ___ As a consumer moves down a given indifference curve, his or her total utility will diminish.
9. ___ In drawing a particular budget line, money income and the prices of the two products are fixed.
10. ___ The lower the consumer's income, the higher her budget line.