Answers for Exam 1

Multiple Choice
1. B
2. D
3. C
4. D
5. D
6. E
7. C
8. B
9. C
10. E
11. C
12. C
13. B
14. C
15. D
16. E
17. C
18. A
19. E
20. B

Short-answer Questions
1. a. It should include the following 4 aspects in your answers. Otherwise, you will lose 1 or 2 points for each missing aspect. And the graph and explanation must be consistent.
   1) They are substitutes to each other.
   2) Demand for orange juice increases.
   3) At $P_0$, there exists shortage (excess demand).
   4) Both of the equilibrium price and quantity increase.

   ![Diagram](image)
b. It should include the following 4 aspects in your answers. Otherwise, you will lose 1 or 2 points for each missing aspect. And the graph and explanation must be consistent.
1) If orange juice is normal /inferior good.
2) Demand for orange juice increases /decreases.
3) At P₀, there exists shortage (excess demand) /surplus (excess supply).
4) Both of the equilibrium price and quantity increase /decrease.

![Diagram of Market Equilibrium]

b. It should include the following 4 aspects in your answers. Otherwise, you will lose 1 or 2 points for each missing aspect. And the graph and explanation must be consistent.
1) If orange juice is normal /inferior good.
2) Demand for orange juice increases /decreases.
3) At P₀, there exists shortage (excess demand) /surplus (excess supply).
4) Both of the equilibrium price and quantity increase /decrease.

![Diagram of Market Equilibrium]

c. It should include the following 4 aspects in your answers. Otherwise, you will lose 1 or 2 points for each missing aspect. And the graph and explanation must be consistent.
1) Orange is one of the inputs for orange juice production.
2) Supply for orange juice decreases.
3) At P₀, there exists shortage (excess demand).
4) The equilibrium price increases and the quantity decreases.

d. It should include the following 3 aspects in your answers. Otherwise, you will lose 1 or 2 points for each missing aspect. And the graph and explanation must be consistent.
1) Supply for orange juice increases.
2) At P₀, there exists surplus (excess supply).
3) The equilibrium price decreases and the quantity increases.

![Graph showing supply and demand curves with equilibrium points](image)

2. a.

<table>
<thead>
<tr>
<th>Number of movies rented per week</th>
<th>Total utility</th>
<th>Marginal utility</th>
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<tr>
<td>0</td>
<td>0</td>
<td>--------</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
<td>10</td>
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<tr>
<td>2</td>
<td>17.5</td>
<td>7.5</td>
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<td>3</td>
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<td>2.5</td>
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<tr>
<td>5</td>
<td>26</td>
<td>1</td>
</tr>
</tbody>
</table>

MU decreases as Q increases. And each additional movie provides less additional utility than previous.

b. The graph need not to be exact that shape but it should be labeled and downward sloping, otherwise you will lose some points.

c. 3 movies.