1. If a product's price rises by 6%, and its quantity demanded falls by 8%, then we can say that demand for this product is:
   A) perfectly inelastic.
   B) inelastic.
   C) unitary elastic.
   D) elastic.

2. If a 1% increase in the price of gummy bears causes gummy bear sales to decline by 0.4%, then the price elasticity of demand is:
   A) 2.5.
   B) 0.04.
   C) 0.4.
   D) 4.

3. If the price increases by 100% and the quantity decreases by 50%, then the elasticity of demand is:
   A) 0.5.
   B) 2.
   C) 1.
   D) 5.

4. Price is $1 and total revenue is $200. If price increases to $2 and total revenue increases to $400, you know that the demand for the product is:
   A) elastic.
   B) inelastic.
   C) unitary.
   D) perfectly inelastic.

5. If the price of a commodity increases by 5%, the total revenue spent on which of the following commodities would probably decrease?
   A) gasoline
   B) salt
   C) prescription medicine for diabetes
   D) air travel to Barcelona
6. If the price of a product falls by 15%, and the quantity supplied falls by 25%, the elasticity of supply is:
A) 0.10.
B) 0.40.
C) 1.67.
D) 10.00.

7. Which of the following represents a market period?
A) spring peach harvest in central Texas
B) three years in the oil industry
C) two years in the honey industry
D) one year in the laptop computer industry

8. (Figure: Determining Elasticity of Supply) The graph has four supply curves. Which curve is infinitely elastic?
A) S₁
B) S₂
C) S₃
D) S₄
9. Subira earns $125,000 a year and pays $20,000 in a certain tax. Qamar earns $75,000 a year and pays $15,000 in the same tax. We can conclude that this tax is a:
   A) flat tax.
   B) lump-sum tax.
   C) progressive tax.
   D) regressive tax.

10. “Tax incidence” is defined as:
    A) how federal and local taxes are collected.
    B) which goods and services are taxed.
    C) who bears the burden of a federal or local tax.
    D) who collects a federal or local tax.

11. Suppose the price of a hamburger is $2 and the price of a soft drink is $1. If Jill has $10, then she can buy:
    A) three hamburgers and four soft drinks.
    B) four hamburgers and three soft drinks.
    C) as many hamburgers and soft drinks as she wants.
    D) five hamburgers and five soft drinks.

Use the following to answer question 12:

**Figure: Bowling and Chinese Buffet**
12. (Figure: Bowling and Chinese Buffet) The price of a Chinese buffet dinner is $10 and an evening of bowling costs $20. Bill has $100/month to spend on these two goods. Assuming Bill is a utility-maximizing consumer, if Bill wants to eat at the Chinese buffet six times this month, he can only go bowling _____ time(s) this month.
A) one
B) two
C) three
D) four

Use the following to answer question 13:

Figure: Quarts of Milk and Jars of Honey

13. (Figure: Quarts of Milk and Jars of Honey) A shift in the budget line in the figure from 3 to 2 is caused by a(n):
A) increase in the price of honey.
B) decrease in the price of honey.
C) increase in the price of milk.
D) decrease in the price of milk.

14. Marginal utility is NOT:
A) measured in utils.
B) a measure of satisfaction.
C) the same for all units of a commodity consumed.
D) used to explain how consumers make decisions.
15. Kama gets 180 total utils from taking three yoga classes this month. The additional utility derived from taking a fourth yoga class this month is 40 utils. Which of the following statements would be TRUE?
   A) The total utility from taking four yoga classes will be 140 utils.
   B) The marginal utility from the fifth yoga class will be greater than 40 utils but less than 220 utils.
   C) The marginal utility of the third yoga class will be greater than 40 utils.
   D) The marginal utility from the second yoga class will be less than 40 utils.

16. Bob loves to eat blue jelly beans. He gets 50 units of utility for the first jelly bean, 40 for the second, 30 for the third, 20 for the fourth, and an additional 10 for the fifth. For the first jelly bean, the marginal utility is ________, and the total utility for eating five is ________.
   A) 50; 150
   B) 50; 140
   C) 140; 50
   D) 50; 20

Use the following to answer question 17:

<table>
<thead>
<tr>
<th>Q</th>
<th>TU</th>
<th>MU</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>—</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>B</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>53</td>
<td>C</td>
</tr>
<tr>
<td>4</td>
<td>D</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>71</td>
<td>E</td>
</tr>
</tbody>
</table>

17. (Table) The table shows the total utility and marginal utility for ice cream consumption. In the table, the value for B is:
   A) 35.
   B) 40.
   C) 45.
   D) 50.
Use the following to answer question 18:

<table>
<thead>
<tr>
<th>Root Beer</th>
<th>Candy Bars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td>Total Utility</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>2</td>
<td>110</td>
</tr>
<tr>
<td>3</td>
<td>150</td>
</tr>
<tr>
<td>4</td>
<td>180</td>
</tr>
<tr>
<td>5</td>
<td>200</td>
</tr>
<tr>
<td>6</td>
<td>210</td>
</tr>
</tbody>
</table>

18. (Table) Using the information in the table, assume the consumer has a weekly budget of $3, the price of a root beer is $1 and the price per candy bar is $0.50. If the consumer maximizes utility, total utility is _____ utils.
   A) 290
   B) 240
   C) 260
   D) 350

19. Ramiro has been an accounting major for three years, but isn't doing very well in his courses. He has done very well in his law courses, but doesn't want to change his major to law because he has already spent three years as an accounting major, and doesn't want to lose those three years. Ramiro is subject to:
   A) altruism.
   B) a framing bias.
   C) overconfidence.
   D) a sunk cost fallacy.

20. Rose bought a mattress for her guest bedroom on sale for $100. The mattress is nonreturnable. Everyone who slept on the mattress said it was very uncomfortable, but Rose won't get rid of it because she spent $100 on it. Now no one will sleep in the guest bedroom. What psychological factor associated with behavioral economics explains Rose's behavior?
   A) a sunk cost fallacy
   B) overvaluing the present relative to the future
   C) overconfidence
   D) a framing bias
21. If the price of a mango is $2 and a farmer sells 2,000 mangos, but it costs him $400 for labor, $1,600 for rent, and $2,000 for advertising, then the farmer:
   A) makes $2,000 in profit.
   B) loses $2,000 in profit.
   C) makes $2,000 in total revenue.
   D) makes $4,000 in total revenue.

22. Which of the following is NOT considered an explicit cost?
   A) electricity
   B) depreciation on equipment
   C) building insurance
   D) rent

23. To pursue a goal of being a business owner, Mary left a job that paid $40,000 per year. At the end of her first year in business, her cash revenues summed up to $90,000 and her explicit costs were $50,000. Also, in order to fund her business startup, Mary cashed in a $20,000 certificate of deposit that was providing a yield of 5%. Ceteris paribus, Mary's economic profit is:
   A) $40,000.
   B) $1,000.
   C) $1,000.
   D) $0.

24. In terms of the actual time period, the “long run” is probably the shortest for a(n):
   A) capital-intensive company.
   B) large public utility.
   C) industry incapable of quick adaptations to market demand.
   D) small business providing house-painting services.
Use the following to answer questions 25-26:

<table>
<thead>
<tr>
<th>Labor</th>
<th>Total Product</th>
<th>MP</th>
<th>AP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>21</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>31</td>
<td>10</td>
<td>7.75</td>
</tr>
<tr>
<td>5</td>
<td>40</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>48</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>6</td>
<td>7.71</td>
</tr>
<tr>
<td>8</td>
<td>57</td>
<td>3</td>
<td>7.12</td>
</tr>
<tr>
<td>9</td>
<td>57</td>
<td>0</td>
<td>6.33</td>
</tr>
<tr>
<td>10</td>
<td>54</td>
<td>–3</td>
<td>5.4</td>
</tr>
</tbody>
</table>

25. (Table) In the table, what is the MP of the third worker?
   A) 7
   B) 8
   C) 9
   D) 10

26. (Table) In the table, negative marginal returns occur beginning with worker:
   A) 5.
   B) 7.
   C) 9.
   D) 10.
Use the following to answer question 27:

**Figure: Determining Marginal Returns**

<table>
<thead>
<tr>
<th>Labor</th>
<th>Total Product</th>
<th>MP</th>
<th>AP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>21</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>31</td>
<td>10</td>
<td>7.75</td>
</tr>
<tr>
<td>5</td>
<td>40</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>48</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>7</td>
<td>54</td>
<td>6</td>
<td>7.71</td>
</tr>
<tr>
<td>8</td>
<td>57</td>
<td>3</td>
<td>7.12</td>
</tr>
<tr>
<td>9</td>
<td>57</td>
<td>0</td>
<td>6.33</td>
</tr>
<tr>
<td>10</td>
<td>54</td>
<td>-3</td>
<td>5.4</td>
</tr>
</tbody>
</table>

27. (Figure: Determining Marginal Returns) Referring to both the table and the figure, adding a third worker leads to:
A) increasing marginal returns.
B) diminishing marginal returns.
C) constant marginal returns.
D) negative marginal returns.
Use the following to answer question 28:

<table>
<thead>
<tr>
<th>Q</th>
<th>VC</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>$25</td>
</tr>
<tr>
<td>1</td>
<td>$40</td>
</tr>
<tr>
<td>2</td>
<td>$55</td>
</tr>
<tr>
<td>3</td>
<td>$70</td>
</tr>
<tr>
<td>4</td>
<td>$85</td>
</tr>
</tbody>
</table>

28. (Table) Referring to the table, suppose the coffee plant experiences fixed costs of $35, then, at 2 units of production, the firm would have total costs of:
A) $60.
B) $20.
C) $90.
D) $55.

29. Marginal cost (MC) will equal average total cost (ATC) at the point where:
A) AVC is lowest.
B) MC is lowest.
C) fixed cost is lowest.
D) ATC is lowest.

Use the following to answer question 30:

<table>
<thead>
<tr>
<th>L</th>
<th>Q</th>
<th>MP</th>
<th>AP</th>
<th>FC</th>
<th>VC</th>
<th>TC</th>
<th>ATC</th>
<th>AVC</th>
<th>AFC</th>
<th>MC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>500</td>
<td>450</td>
<td>950</td>
<td>190</td>
<td>90</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>7</td>
<td>6</td>
<td>500</td>
<td>900</td>
<td>1,400</td>
<td>116.67</td>
<td>41.67</td>
<td>64.29</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>21</td>
<td>7</td>
<td>5</td>
<td>500</td>
<td>1,350</td>
<td>2,850</td>
<td>88.10</td>
<td>64.29</td>
<td>23.81</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>31</td>
<td>10</td>
<td>8</td>
<td>500</td>
<td>1,800</td>
<td>3,300</td>
<td>74.19</td>
<td>58.06</td>
<td>16.13</td>
<td>45</td>
</tr>
<tr>
<td>5</td>
<td>40</td>
<td>9</td>
<td>7.75</td>
<td>500</td>
<td>2,250</td>
<td>4,750</td>
<td>68.75</td>
<td>56.25</td>
<td>12.50</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>48</td>
<td>8</td>
<td>7.12</td>
<td>500</td>
<td>2,700</td>
<td>5,200</td>
<td>66.67</td>
<td>56.25</td>
<td>10.42</td>
<td>56.25</td>
</tr>
<tr>
<td>7</td>
<td>6</td>
<td>6</td>
<td>7.71</td>
<td>500</td>
<td>3,150</td>
<td>6,650</td>
<td>67.59</td>
<td>58.33</td>
<td>9.26</td>
<td>75</td>
</tr>
<tr>
<td>8</td>
<td>57</td>
<td>3</td>
<td>7.12</td>
<td>500</td>
<td>3,600</td>
<td>7,100</td>
<td>71.93</td>
<td>63.16</td>
<td>8.77</td>
<td>150</td>
</tr>
<tr>
<td>9</td>
<td>57</td>
<td>0</td>
<td>6.33</td>
<td>500</td>
<td>4,050</td>
<td>8,550</td>
<td>79.82</td>
<td>71.05</td>
<td>8.77</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>54</td>
<td>–3</td>
<td>5.4</td>
<td>500</td>
<td>4,500</td>
<td>9,000</td>
<td>92.59</td>
<td>83.33</td>
<td>9.26</td>
<td>–150</td>
</tr>
</tbody>
</table>

Page 10
30. (Table) Referring to the table, _____ is the total cost when producing 21 units.
   A) $850
   B) $1,850
   C) $2,050
   D) There is not enough information to answer this question.

31. Miguel owns a taco shop in the city. There are many other taco shops in the city, and there
   are no barriers to entry. Miguel can charge a higher price for his food because he uses a
   special sauce passed down to him from his grandmother. Miguel stays in the taco business
   because he makes the same profit he would make if he devoted his resources to his next
   best option. What aspect of Miguel's business indicates that he is not in a perfectly
   competitive industry?
   A) Miguel makes economic profits in the long run.
   B) Miguel is one of many taco shop owners.
   C) Miguel has some control over his price.
   D) Tacos are a homogeneous product.

32. Sam, who owns 100 shares of Facebook stock, hopes to raise the market price of the stock
   by buying another 100 shares. The MAIN reason his endeavor will fail is that:
   A) he is such a small part of the overall market that his extra demand will have a
      negligible effect on the market price.
   B) Facebook is a monopoly and therefore controls the price of its stock.
   C) the Securities and Exchange Commission will intervene if anyone tries to influence
      stock prices.
   D) the other stockholders will attempt to neutralize Sam's efforts.

33. Corn is a perfectly competitive commodity. In the market place, the demand curve for
   corn is:
   A) perfectly elastic.
   B) perfectly inelastic.
   C) downward sloping.
   D) upward sloping.

34. In the short run:
   A) the number of firms is fixed.
   B) all factors of production are variable.
   C) firms will leave the industry if they are not making enough profit.
   D) perfectly competitive firms cannot make positive economic profits.
35. If Annie has sold 40 apples in a perfectly competitive market and her total revenue is $80, when she sells her 41st apple, her marginal revenue will be:
   A) $2.
   B) $20.
   C) $0.75.
   D) $0.50.

36. If a perfectly competitive firm has total revenue equal to $400 when it produces 100 units, and if its total revenue rises to $404 when it produces 101 units, the marginal revenue of the 101st unit is:
   A) $404.
   B) $4.
   C) $1.
   D) $0.25.

37. When perfectly competitive firm X sells three units of product Z, its marginal revenue is $4.67. When it sells 100 units, marginal revenue is $4.67. We can conclude that the price:
   A) is dropping.
   B) is $4.67.
   C) is too high.
   D) The price cannot be calculated with the information given.

38. Jack is making a normal profit by selling firewood in a perfectly competitive market. His price is $100 per load. If the market price goes up to $120, then he can expect:
   A) more competition in the future.
   B) less competition in the future.
   C) about the same amount of competition in the future.
   D) more customers in the future.

39. Consider the corn industry (a perfectly competitive industry). The price per bushel is $2 and there are constant returns to scale. If the long-run, minimum ATC is $1.50 per bushel, it should follow that (ceteris paribus):
   A) the long-run price will remain at $2 per bushel.
   B) the long-run price will end up somewhere between $1.50 and $2 per bushel.
   C) the long-run price will be $1.50 per bushel.
   D) It is not possible to determine what will happen, with the information given.
40. In June 2013, Apple controlled 75% of the digital music market; therefore, the digital music market can be characterized as a monopoly.
   A) True
   B) False
ECO 2023 Principles of Microeconomics - Answer Key

1. D
2. C
3. A
4. D
5. D
6. C
7. A
8. D
9. D
10. C
11. A
12. B
13. C
14. C
15. C
16. A
17. B
18. A
19. D
20. A
21. D
22. B
23. C
24. D
25. C
26. D
27. A
28. C
29. D
30. B
31. C
32. A
33. C
34. A
35. A
36. B
37. B
38. A
39. C
40. B