Eastern Mediterranean University
Faculty of Business and Economics
Department of Economics
2014-15 Spring Semester

ECON101 - Introduction to Economics I
Sample Questions for Quiz 2

Answer Key

Part A: Multiple Choice Questions (3 points each, total 30 points)

1. When a firm sells 10,000 units of output at a price of £2.50 per unit, its total revenue is:
   A. £250,000
   B. £2,500,000
   C. £25,000
   D. £2,500
   E. None of the above.

2. In order to calculate a firm's accounting profit, it is necessary to:
   A. subtract both accounting and economic costs from total revenue.
   B. subtract accounting cost from total revenue.
   C. subtract the firm's opportunity cost from total revenue.
   D. subtract any economic profit from total revenue.

3. Supernormal profits are:
   A. above average profits in a sector.
   B. a measure of profits that accounts for opportunity costs.
   C. positive revenues.
   D. All the above.

4. Marginal cost measures:
   A. the cost of producing Q units of a good.
   B. the cost of producing one extra unit of a good.
   C. the cost of producing each unit of a good.
   D. the cost of producing the units of a good that maximize profits.

5. A firm's marginal cost of production is:
   A. its total cost of production divided by total output.
   B. the change in average cost of production divided by the level of output.
   C. the change in total cost incurred as a result of producing one more unit of output.
   D. the cost incurred by the firm even if no output is produced.

6. If a firm incurs a total cost of £874 when it produces 10 units of output and a total cost of £950 when it produces 11 units of output, the marginal cost is ______.
   A. 1824
   B. 950
   C. 54
   D. 76
   E. Cannot be determined from the information given.
7. Suppose that in your firm, the amount of capital and plant size are fixed. With 10 workers, you can produce 180 units of output and with 11 workers 190 units of output, then:
   A. the average product of labour when 10 workers are hired is 17.
   B. when the 11th worker is hired, average product of labour is less than marginal product.
   C. the firm has passed the point of diminishing returns to labour.
   D. the marginal product of the 11th worker is 10 units of output.

8. According to the law of diminishing marginal utility, the satisfaction that you get from consuming apple pie decreases:
   A. as the price of apple pie falls.
   B. with every additional slice of apple pie that you eat.
   C. your income rises and you can substitute more exotic desserts.
   D. as you get older.

9. In order to determine the market demand schedule for a product, you must:
   A. know the market supply curve for the product.
   B. sum the quantities demanded by all consumers at different prices.
   C. calculate the average quantity demanded by all consumers at different prices.
   D. sum the different prices that consumers are willing to pay for different quantities of the good.

10. When an extra unit of a good is consumed, total utility changes by an amount equal to:
    A. the price of the extra unit consumed.
    B. the marginal utility gained or lost by consuming the extra unit.
    C. the average utility of all goods consumed.
    D. the total utility divided by the number of units previously consumed.
Part B: Essay Questions (70 points)

1. Marc has an income of $20 per week. Root beer costs $5 a can and CDs cost $10 each.

   A. Draw a graph of Marc’s budget.

   B. What is the slope of Marc’s budget line? What does it equal?

   Answer: Slope of Marc’s budget line = \(-\frac{P_{\text{CD}}}{P_{\text{root beer}}}\) = \(-\frac{10}{5}\) = -2. Slope of Marc’s budget line is equal to the relative price ratio with a negative sign.

   C. What are the quantities of root beer and CDs that Marc buys?

   Answer: 2 root beers, and 1 CD
D. What is Marc's marginal rate of substitution of CDs for root beer at the point at which he consumes?

Answer: MRS of CDs for root beer at the point at which Marc consumes is equal to the slope of the budget line, therefore it is equal to -2.

E. Now suppose that in the situation described in problem 2, the price of a CD falls to $5 and the price of root beer and Marc's income remain constant. Draw a new graph of Marc's budget.

F. Find the new quantities of root beer and CDs that Marc buys.

Answer: 1 root beers, and 3 CD

G. Draw Marc's demand curve for CDs.
2. Given the total product data for Joy’s Cleaners in the following table, answer the following questions.

<table>
<thead>
<tr>
<th>Number of workers</th>
<th>Number of suits cleaned daily</th>
<th>Marginal product of labor</th>
<th>Average product of labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>26</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>3</td>
<td>46</td>
<td>20</td>
<td>15.3</td>
</tr>
<tr>
<td>4</td>
<td>60</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>73</td>
<td>13</td>
<td>14.6</td>
</tr>
<tr>
<td>6</td>
<td>84</td>
<td>11</td>
<td>14</td>
</tr>
</tbody>
</table>

A. Complete the table above. (14 points)

**Answer:** See the calculations in bold fonts in the table.

B. Over what output range does Joy’s Cleaners enjoy increasing marginal returns? (5 points)

**Answer:** Increasing marginal returns occurs in the output range of 12 and 46. As we can see from the table, marginal product of the first three workers increases from 12 to 20.

C. Over what output range does Joy’s Cleaners experience diminishing marginal returns? (5 points)

**Answer:** Joy’s Cleaners experiences diminishing marginal returns after the output level 46. That is to say, when the firm employs more than 3 workers, productivity of each labour employed decreases.

D. Over what output range does Joy’s Cleaners experience rising marginal cost? (6 points)

**Answer:** It is known that as long as the marginal product of labour rises, the marginal cost falls. Furthermore, once diminishing returns to labour sets in, the marginal product of labour falls and marginal cost starts to rise again. Therefore, Joy’s Cleaners experience rising marginal cost in the output range of 46 and 84.