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 incurrs 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?

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

   D. What is Marc’s marginal rate of substitution of CDs for root beer at the point at which he consumes?

   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.
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.

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<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>
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<tr>
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<td></td>
</tr>
<tr>
<td>6</td>
<td>84</td>
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<td></td>
</tr>
</tbody>
</table>

A. Complete the table above. (14 points)

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

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

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