FORM A

Use the following information to answer questions (1) through (5):

ABC Gardening uses labor (L) and lawn mowers (K) to mow lawns. The following table reflects the relationship between the number of lawns mowed per hour and the quantities of inputs employed per hour:

<table>
<thead>
<tr>
<th>Number of Lawns Mowed</th>
<th>L</th>
<th>K</th>
<th>MP</th>
<th>AP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3/2</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>2</td>
<td>-2</td>
<td>0.5</td>
</tr>
</tbody>
</table>

[1] If the price charged to mow a lawn equals $10, and workers are paid $7 per hour to work for the firm, then the marginal revenue product of the 2nd worker equals:
   A. $2
   B. $3
   C. $14
   D. $20
   
   \[
   \text{MRP = P}_{\text{output}} \times MP = 10 \times 2 = 20
   \]

[2] The average product of 4 workers equals:
   A. 8
   B. 4
   C. 2
   D. 0.5
   
   \[
   \text{AP} = \frac{\text{TP}}{L} = \frac{8}{4} = 2
   \]

   A. True
   B. False
   
   Note: K is fixed at 2. Hence, Short-Run

[4] Diminishing (marginal) returns begins with the hiring of the ____ worker.
   A. 2nd
   B. 3rd
   C. 4th
   D. 5th

[5] It is economically efficient to hire 5 workers.
   A. True
   B. False
   
   Cheaper to hire 3 workers to mow 6 lawns
[6] When marginal product is greater than average product, it must be that average product increases as we add more of the variable input.

A. True  
B. False  

[7] Assuming a firm faces a positive opportunity cost, it must be that economic cost exceeds accounting cost.

\[ \text{Economic Cost} = \text{Accounting Cost} + \text{Opportunity Cost} \]

A. True
B. False

Use the following information to answer the next three questions:

**Impossible Dogs**, a producer of vegan hotdogs, faces the following short-run total cost schedule:

<table>
<thead>
<tr>
<th>Quantity of Vegan Hotdogs</th>
<th>TVC</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>100</td>
<td>50</td>
<td>150</td>
</tr>
<tr>
<td>200</td>
<td>150</td>
<td>250</td>
</tr>
<tr>
<td>300</td>
<td>300</td>
<td>400</td>
</tr>
</tbody>
</table>

[8] Total fixed cost equals:
A. 150  
B. 100  
C. 75   
D. 0

[9] The average variable cost of producing 100 vegan hotdogs equals:
A. 1.50  
B. 1.00  
C. 0.50  
D. 0.66

[10] The average total cost of producing 200 vegan hotdogs equals:
A. 250  
B. 1.25  
C. 0.50  
D. None of the above
FORM B

[1] When marginal product is less than average product, it must be that average product increases as we add more of the variable input.

A. True  
B. False  

[2] Assuming a firm faces a positive opportunity cost, it must be that accounting cost exceeds economic cost.

Economic Cost = Accounting Cost + Opportunity Cost

If Opp. Cost > 0, then Econ. Cost > Acc. Cost

A. True  
B. False

Use the following information to answer the next three questions:

Impossible Dogs, a producer of vegan hotdogs, faces the following short-run total cost schedule:

<table>
<thead>
<tr>
<th>Quantity of Vegan Hotdogs</th>
<th>TVC</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>150</td>
</tr>
<tr>
<td>100</td>
<td>100</td>
<td>250</td>
</tr>
<tr>
<td>200</td>
<td>250</td>
<td>400</td>
</tr>
<tr>
<td>300</td>
<td>450</td>
<td>600</td>
</tr>
</tbody>
</table>

[3] Total fixed cost equals:

A. 150  
B. 100  
C. 75  
D. 0

[4] The average variable cost of producing 100 vegan hotdogs equals:

A. 1.50  
B. 1.00  
C. 0.50  
D. 0.66

[5] The average total cost of producing 200 vegan hotdogs equals:

A. 400  
B. 1.25  
C. 0.50  
D. None of the above
Use the following information to answer questions (6) through (10):

ABC Gardening uses labor (L) and lawn mowers (K) to mow lawns. The following table reflects the relationship between the number of lawns mowed per hour and the quantities of inputs employed per hour:

<table>
<thead>
<tr>
<th>Number of Lawns Mowed</th>
<th>L</th>
<th>K</th>
<th>MP</th>
<th>AP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
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<td>1</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>2</td>
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</tr>
<tr>
<td>8</td>
<td>4</td>
<td>2</td>
<td>-2</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>2</td>
<td>6/5</td>
<td></td>
</tr>
</tbody>
</table>

[6] If the price charged to mow a lawn equals $7, and workers are paid $10 per hour to work for the firm, then the marginal revenue product of the 2nd worker equals:

A. $2  
B. $3  
C. $14  
D. $20

[7] The average product of 4 workers equals:

A. 8  
B. 4  
C. 2  
D. 0.50

[8] Hourly production coincides with the long-run.

A. True  
B. False  

Note: K is fixed at 2. Hence, Short-Run

[9] Diminishing (marginal) returns begins with the hiring of the ___ worker.

A. 2nd  
B. 3rd  
C. 4th  
D. 5th

[10] It is economically efficient to hire 5 workers.

A. True  
B. False  

Cheaper to hire 3 workers to mow 6 lawns