1. Assume Billy Bayou decides to get into the landscaping business. He spends $15,000 of his own money to buy an existing landscaping company from Celia. Billy quits his $30,000/year job and takes the plunge. The first year he records the revenues and costs shown at right. The hours, risk, and stress are exactly the same as at his old job.

What is Billy Bayou’s Economic profit?

a. $ 30,000 < econ π
b. econ π = $ 30,000
c. $ 0 < econ π < $ 30,000
d. econ π = $ 0
e. econ π < $ 0

2. Which of the following is true?
   a. Monica is making a killing. The business is definitely more than worthwhile for her.
   b. The business is very bad for Monica. She should quit the business at the earliest opportunity.
   c. Monica is likely indifferent between staying in business and leaving.
   d. Not enough information is given. Information on the opportunity cost of Monica’s time is needed to determine the answer.

3. Which of the following is true?
   a. Monica’s accounting profit is greater than zero.
   b. Monica’s accounting profit is equal to zero.
   c. Monica’s accounting profit is less than zero.
   d. Not enough information is given. Information on the opportunity cost of Monica’s time is needed to determine the answer.
4. Which of the following is the rule for a firm trying to choose the optimal level of production?
   a. Produce up to the point where the production process changes from diminishing marginal product to increasing marginal product (stop in the diminishing marginal product range).
   b. Produce at the point where Average Variable Costs is at a minimum.
   c. Produce at the point where Average Total Costs is at a minimum.
   d. Produce at the point where Marginal Revenue = Marginal Costs.

5. Henrietta owns a lawn mowing company. Currently, she works by herself and does not hire anyone else. Currently (by herself) she can mow 6 lawns per day. Which of the following illustrates diminishing marginal product?
   a. Henrietta hires 1 helper. Her company’s output increases to 10 lawns per day.
   b. Henrietta hires 1 helper. Her company’s output increases to 12 lawns per day.
   c. Henrietta hires 1 helper. Her company’s output increases to 14 lawns per day.
   d. all of the above
   e. none of the above

6 – 7: Irene owns a manufacturing company. Her costs of production as a function of production is given at right. Answer #’s 6 – 7 based on this table.

<table>
<thead>
<tr>
<th>Q/Day</th>
<th>TC</th>
<th>MC</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 tons</td>
<td>$ 450</td>
<td>$400</td>
</tr>
<tr>
<td>1 tons</td>
<td>$ 850</td>
<td>$300</td>
</tr>
<tr>
<td>2 tons</td>
<td>$1,150</td>
<td>$200</td>
</tr>
<tr>
<td>3 tons</td>
<td>$1,350</td>
<td>$100</td>
</tr>
<tr>
<td>4 tons</td>
<td>$1,450</td>
<td>$200</td>
</tr>
<tr>
<td>5 tons</td>
<td>$1,650</td>
<td>$300</td>
</tr>
<tr>
<td>6 tons</td>
<td>$1,950</td>
<td>$400</td>
</tr>
<tr>
<td>7 tons</td>
<td>$2,350</td>
<td>$400</td>
</tr>
<tr>
<td>8 tons</td>
<td>$2,750</td>
<td>$400</td>
</tr>
</tbody>
</table>

6. Over what range does Irene’s firm exhibit diminishing marginal product?
   a. 0 to 4 tons
   b. 0 to 6 tons
   c. 4 tons and up
   d. 6 tons and up
   e. none of the above

7. For which (microeconomic) time period is this data for?
   a. short-run
   b. intermediate-run
   c. long-run
   d. do-run-run
   e. More information is needed to answer this.

8. Julie and John go out to a very small, but lovely Italian restaurant. They then go see a movie at a major cinema-plex. Which of the following is most likely true considering the restaurant and the cinema-plex?
   a. The long-run is the same length of time for both firms.
   b. The long-run is a longer time period for Italian restaurant.
   c. The long-run is a longer time period for cinema-plex.
   d. The long-run is a conceptual issue. Inter-firm comparisons cannot be made.
9. Which is the best example of a firm experiencing **Diminishing Marginal Product** of labor?
   a. A manufacturing company hires more labor but, because it has a limited number of machines, begins to run out of highly productive ways to use its workers.
   b. A concrete company would like to expand its output. Demand, however, is limited. In order to sell more it has to increase the price it charges.
   c. A construction company has hired all of the highly qualified personnel in an area. It has to re-train its entry level (i.e. less qualified) employees to expand output.
   d. A construction company has hired all of the unemployed qualified personnel in an area. To expand output, it now has to hire workers from other firms by offering higher wages.
   e. Both C & D are examples of diminishing marginal product of labor.

10. After spending 20 very successful years in the private sector, you decide to quit your job and run for mayor of your town. Below you are given preferences regarding the optimal number of police officers employed by the city, for all voters. **According to the median voter theorem**, what platform should you pick to maximize your chances of getting elected?

<table>
<thead>
<tr>
<th>Desired # of cops</th>
<th>15</th>
<th>15</th>
<th>15</th>
<th>20</th>
<th>30</th>
<th>35</th>
<th>45</th>
</tr>
</thead>
<tbody>
<tr>
<td>voter</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
</tbody>
</table>

   a. “I’ll hire 15 cops.”
   b. “I’ll hire 20 cops.”
   c. “I’ll hire 25 cops.”
   d. “I’ll hire 30 cops.”
   e. None of the above.

11. **According to the median voter theorem**, what should the Democrats do in the 2002 elections to win back Congress?
   a. Move back to their “core constituency” and “core values”. i.e. Significantly differentiate themselves from the Republicans by adopting a more “liberal” platform.
   b. Stress issues “close to home” (i.e. domestic issues) rather than “far way” (i.e. foreign policy issues)
   c. Move closer to the political “center”. i.e. Become slightly more Republican in platform.
   d. Cater to what voters actually respond to, namely sound bites and attack ads, rather than what voters should respond to.
   e. Treat voters as long-term “customers” rather than short-term “customers”.

12. **According to the median voter theorem**, what types of candidates do we tend to get in general political elections?
   a. Candidates which cater to “special interests”, a small subset of “fringe” voters.
   b. Candidates which provide voters with an image of what they, the voters, would personally like to be (ex. tall candidates).
   c. Candidates which use different stands on the issues to differentiate themselves for their opponents.
   d. Candidates which are very close to each other in terms of their stances on the issues.

---

**Answer questions 13 and 14 based on the information on the next page.** This information is for a firm, Tomlinson Manufacturing, which makes aluminum fishing boats. The company's engineers have estimated different cost curves for several possible plant sizes.
<table>
<thead>
<tr>
<th>Factory Size</th>
<th>150,000 ft²</th>
<th>200,000 ft²</th>
<th>250,000 ft²</th>
<th>300,000 ft²</th>
<th>350,000 ft²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest ATC</td>
<td>$900</td>
<td>$800</td>
<td>$800</td>
<td>$850</td>
<td>$950</td>
</tr>
<tr>
<td>Output at which lowest ATC occurs</td>
<td>30 boats per day</td>
<td>40 boats per day</td>
<td>50 boats per day</td>
<td>60 boats per day</td>
<td>70 boats per day</td>
</tr>
</tbody>
</table>

13. Which of the following describe costs over the range from **40 boats to 50 boats** per day?
   a. dis-economies of scale  
   b. economies of scale  
   c. hyperbolic scale effects  
   d. hyperbolic scale effects  
   e. constant returns to scale

14. Which of the following describe costs over the range from **50 boats to 70 boats** per day?
   a. dis-economies of scale  
   b. economies of scale  
   c. hyperbolic scale effects  
   d. hyperbolic scale effects  
   e. constant returns to scale

**Answer #s 15 – 18 based on the (partial) graph at below right. Yikes! It is only has points for q = 100. Assume Marginal costs behaves “normally”.

15. What is **AFC** when output = 100?
   a. AFC = $40  
   b. $20 < AFC < $40  
   c. **AFC = $20**  
   d. AFC, when Q = 100, can be calculated given the data on the graph. It is not, however, listed above.  
   e. more information is needed to answer this

16. What is **AFC** when output = 101?
   a. AFC = $40  
   b. $20 < AFC < $40  
   c. AFC = $20  
   d. AFC, when Q = 101, can be calculated given the data on the graph. It is not, however, listed above. (AFC = $19.80)  
   e. more information is needed to answer this

17. What is **ATC** when output = 101?
   a. ATC > $60  
   b. ATC = $60  
   c. $40 < ATC < $60  
   d. AFC, when Q = 101, can be calculated given the data on the graph. It is not, however, listed above  
   e. More information is needed to answer this.

18. What is **AVC** when output = 101?
   a. $40 < AVC < $60  
   b. AVC = $40  
   c. AVC < $40  
   d. AFC, when Q = 101, can be calculated given the data on the graph. It is not, however, listed above  
   e. more information is needed to answer this
Answer #’s 19 – 28 based on the chart below. It is for a flour mill in 1800.
Silly me! I left out a lot of data and column labels.

<table>
<thead>
<tr>
<th>(q) Tons of Output</th>
<th>TC</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>$1,000</td>
</tr>
<tr>
<td>1</td>
<td>$1,200</td>
</tr>
<tr>
<td>2</td>
<td>$1,300</td>
</tr>
<tr>
<td>3</td>
<td>$1,500</td>
</tr>
<tr>
<td>4</td>
<td>$1,800</td>
</tr>
<tr>
<td>5</td>
<td>$2,200</td>
</tr>
<tr>
<td>6</td>
<td>$2,700</td>
</tr>
</tbody>
</table>

19. What is the **TFC** of the 5th unit (rounded to the nearest $)?
   a. $ 440  
b. $1,000  
c. $1,200
   d. $3,200  
e. none off the above

20. What is the **TVC** of the 5th unit (rounded to the nearest $)?
   a. $ 440  
b. $1,000  
c. $1,200
   d. $3,200  
e. none off the above

21. What is the **AVC** of the 2nd unit (rounded to the nearest $)?
   a. $ 67    
b. $ 100   
c. $ 150
   d. $ 167   
e. none of the above

22. What is the **AFC** of the 5th unit (rounded to the nearest $)?
   a. $ 67    
b. $ 100   
c. $ 150
   d. $ 167   
e. none of the above

23. What is the **ATC** of the 3rd unit (rounded to the nearest $)?
   a. $1,000  
b. $ 667   
c. $ 500
   d. $ 333   
e. none of the above

24. Over what range, if any is Marginal Product of Labor (MPL) falling? **Dropped**
   a. q = 0 to 2 tons  
b. q = 0 to 3 tons  
c. q > 1 tons and up
   d. q > 2 tons and up **Dropped**
   e. none of the above

25. Over what range, if any is Marginal Product of Labor (MPL) rising?
   a. q = 0 to 2 tons  
b. q = 0 to 3 tons  
c. q > 1 tons and up
   d. q > 2 tons and up  
e. none of the above
26. Assume the firm is a price taker and the market price is $395. How much flour should this firm produce (in order to maximize profits or minimize losses)?
   a. q = 0 tons (shut-down)
   b. q = 4 tons
   c. q = 5 tons
   d. q = 6 tons or more
   e. none of the above

27. Assume the firm is a price taker and the market price stays at $595. How much flour should this firm produce (in order to maximize profits or minimize losses)?
   a. q = 0 tons (shut-down)
   b. q = 4 tons
   c. q = 5 tons
   d. q = 6 tons or more
   e. none of the above

28. Which of the curves at right represents possible AVC and ATC curves?
   a. curves a
   b. curves b
   c. curves c
   d. curves d
   e. none of the above

29. Which of the curves at right represents possible MC and AVC curves?
   a. curves a
   b. curves b
   c. curves c
   d. curves d
   e. none of the above

30. Which of the curves at right illustrates possible AFC and MC curves?
   a. curves a
   b. curves b
   c. curves c
   d. curves d
   e. none of the above

31. Which of the curves at right represents a typical TFC and TC curves?
   a. curves a
   b. curves b
   c. curves c
   d. curves d
   e. none of the above
32. Gwendelin has a company. She has estimated that if she raises her price only a small amount she will lose a considerable number, but not all, of her customers. For example, if she raises price 5%, she estimates her sales will fall by 15%. These customers will go to her many, many competitors.
   a. Monopoly
   b. Monopolistic competition
   c. Duopoly
   d. Perfect competition
   e. none of the above

33. George owns a cement company in the town of Gering, Nebraska. There are two other cement companies in the area. It is very expensive to ship in concrete from other towns so local customers only have the 3 firms to choose from. The firms, however, have competed very hard against each other. None is making high profits and customers are getting their concrete at a low price. What type of industry is concrete in Gering?
   a. Monopolistic Competition
   b. Monopoly
   c. Oligopoly
   d. Perfect competition
   e. none of the above

34. Alan Greenspan, in recent testimony before congress, stated that many U.S. firms need to cut costs by becoming smaller, less bureaucratic, and easier to manage. What, in effect, is Alan Greenspan saying?
   a. these firms are operating in the range of diseconomies of scale
   b. these firms are operating in the range of economies of scale
   c. these firms have been protected by barriers to entry for too long
   d. these firms are not “spreading their overhead” enough
   e. these firms are “spreading their overhead” too much

35. Amanda owns a business in a perfectly competitive industry. Which of the following curves is the demand curve his business faces?
   a.  
   b.  
   c.  
   d.  
   e.  

   ![Graphs of demand curves]
36. Assume the firm depicted is perfectly competitive. **The price of the product is $70** How much should it produce if it wants to maximize profits?
   a. about 455 (± 20)  
   b. about 320 (± 20)  
   c. about 210 (± 20)  
   d. about 115 (± 20)  
   e. None of the above is correct.

37. Assume the firm depicted is perfectly competitive. **The price of the product is $60** How much should it produce if it wants to maximize profits?
   a. about 960 (± 20)  
   b. about 550 (± 20)  
   c. about 320 (± 20)  
   d. about 260 (± 20)  
   e. None of the above is correct.

38. Assume the firm depicted is perfectly competitive. **The price of the product is $50** How much should it produce if it wants to maximize profits?
   a. about 655 (± 20)  
   b. about 495 (± 20)  
   c. about 460 (± 20)  
   d. about 320 (± 20)  
   e. None of the above is correct.

39. Over what range, if any, is the firm experiencing diminishing returns to labor?
   a. from about 0 to 310 units of output  
   b. from about 0 to 450 units of output  
   c. from about 170 units of output and higher  
   d. from about 450 units of output and higher  
   e. More information is needed to answer this.