The homework4 consists 25 questions in total from Chapter 12, 13, and 14. You should bring your answer on Monday, April 16th. in class, and we will have last five minutes to bubble the scantron sheet in class. Late submission of the scantron sheets after Monday would not be accepted.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) Refer to Figure 12-2. What is the amount of profit if the firm produces $Q_2$ units?
   A) It is equal to the vertical distance $g$ to $Q_2$.
   B) It is equal to the vertical distance $c$ to $g$ multiplied by $Q_2$ units.
   C) It is equal to the vertical distance $c$ to $Q_2$.
   D) It is equal to the vertical distance $c$ to $g$.

2) Refer to Figure 12-2. Suppose the firm is currently producing $Q_2$ units. What happens if it expands output to $Q_3$ units?
   A) It makes less profit.
   B) It incurs a loss.
   C) It will be moving toward its profit maximizing output.
   D) Its profit increases by the size of the vertical distance $df$.

3) Refer to Figure 12-2. What happens if the firm produces more than $Q_4$ units?
   A) Its total revenue is increasing faster than its total cost.
   B) Its profit increases.
   C) It could make a profit or a loss depending on what happens to demand.
   D) It makes a loss.
Figure 12-5 shows cost and demand curves facing a typical firm in a constant-cost, perfectly competitive industry.

4) Refer to Figure 12-5. If the market price is $20, what is the firm’s profit-maximizing output?
   A) 750 units   B) 1,100 units   C) 1,350 units   D) 1,800 units

5) Refer to Figure 12-5. If the market price is $20, what is the amount of the firm’s profit?
   A) $5,400   B) $6,750   C) $8,100   D) $16,200

6) Refer to Figure 12-5. If the market price is $20, what is the average profit at the profit-maximizing quantity?
   A) $5   B) $6   C) $9   D) $20

7) Refer to Figure 12-5. What is the amount of the firm’s fixed cost of production?
   A) $5,400   B) $6,750   C) $8,100   D) It cannot be determined.

8) Refer to Figure 12-5. What is the minimum price the firm requires to produce output?
   A) $20   B) $14   C) $5   D) It cannot be determined
Figure 13-8 shows cost and demand curves for a monopolistically competitive producer of iced tea.

9) Refer to Figure 13-8. What is the profit-maximizing output level?
A) 22 cases  
B) 24 cases  
C) 30 cases  
D) 38 cases

10) Refer to Figure 13-8. What is the firm’s profit-maximizing price?
A) $12  
B) $13  
C) $14  
D) $16

11) Refer to Figure 13-8. At the profit-maximizing output level the firm will
A) earn a profit of $60.  
B) break even.  
C) earn a profit of $88.  
D) earn a profit of $176.

12) Refer to Figure 13-8. Based on the diagram, one can conclude that
A) the industry is in long-run equilibrium.  
B) some existing firms will exit the market.  
C) new firms will enter the market.  
D) firms achieve productive efficiency.
Figure 13-14 illustrates a monopolistically competitive firm.

13) Refer to Figure 13-14. Which of the following statements describes the firm depicted in the diagram?
   A) The firm achieves productive efficiency by producing at $Q_0$.
   B) The firm is making no economic profit and will exit the industry.
   C) The firm is in long-run equilibrium and is breaking even.
   D) The firm is suffering an economic loss by producing at $Q_0$ but will break even if it increases its output to $Q_1$.

14) Refer to Figure 13-14. It is possible to lower the average cost of production by expanding output beyond $Q_0$ to $Q_1$. Why wouldn't a firm expand its output to $Q_1$?
   A) Demand is not sufficient for consumers to buy $Q_1$.
   B) The firm's marginal revenue would be negative at $Q_1$.
   C) The firm wants to maximize accounting profit rather than economic profit.
   D) The firm would suffer an economic loss at $Q_1$ while it would break even at $Q_0$.

15) Which of the following is true for a monopolistically competitive firm in long-run equilibrium?
   A) $P = ATC$ and $MR = MC$.
   B) $P > ATC$ and $P > MR$.
   C) $P > MR$ and $MC = ATC$.
   D) $P = ATC$ and $P = MC$. 
16) Refer to Figure 13-17. What is the productively efficient output for the firm represented in the diagram?
   A) $Q_f$ units  
   B) $Q_g$ units  
   C) $Q_h$ units  
   D) $Q_j$ units

17) Refer to Figure 13-17. What is the allocatively efficient output for the firm represented in the diagram?
   A) $Q_f$ units  
   B) $Q_g$ units  
   C) $Q_h$ units  
   D) $Q_j$ units

18) Refer to Figure 13-17. What is the amount of excess capacity?
   A) $Q_h - Q_f$ units  
   B) $Q_j - Q_h$ units  
   C) $Q_h - Q_g$ units  
   D) $Q_j - Q_f$ units

19) Refer to Figure 13-17. Suppose the firm is currently producing $Q_f$ units. What happens if it increases its output to $Q_g$ units?
   A) Its average cost of production will fall and its profit will rise.
   B) It will move from a zero profit situation to a profit situation.
   C) It will be taking advantage of economies of scale and will be able to lower the price of its product.
   D) It will move from a zero profit situation to a loss situation.
Assume that Lexus (L) is the first automobile company to produce a luxury class hybrid automobile and is the only such company for the past four years. BMW is now considering producing its own luxury hybrid automobile and Lexus must decide whether or not to lower the price of its luxury hybrid to counter BMW's entry into the luxury hybrid niche.

20) **Refer to Figure 14-1.** Should Lexus lower its price in order to deter BMW's entry into the luxury hybrid automobile market?
   A) Yes, it will drive BMW out of the market.
   B) In terms of profit earned, it makes no difference whether Lexus lowers its price or not; in either case it will make $280 million profit if BMW enters.
   C) No, because BMW will enter the market regardless of Lexus' decision about its price.
   D) No, it should keep the same price and work to capitalize on its brand loyalty.

21) **Refer to Figure 14-1.** If Lexus lowers its price, will this deter BMW from entering the market?
   A) No, because BMW will be able to break Lexus' first-mover advantage.
   B) Yes, because BMW will make a smaller profit than Lexus if it chooses to compete.
   C) Yes, because BMW stands to lose $100 million if it competes with Lexus.
   D) No, because BMW will still make a profit of $120 if it competes with Lexus.
Two rival oligopolists in the athletic supplements industry, the Power Fuel Company and the Brawny Juice Company, have to decide on their pricing strategy. Each can choose either a high price or a low price. Table 14-8 shows the payoff matrix with the profits that each firm can expect to earn depending on the pricing strategy it adopts.

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<thead>
<tr>
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<th>Power Fuel’s (P) Strategy</th>
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<tbody>
<tr>
<td></td>
<td>High Price</td>
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<td>Brawny Juice’s (B) Strategy</td>
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<tr>
<td></td>
<td>High Price</td>
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<tr>
<td></td>
<td>P: $12m</td>
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<td>B: $12m</td>
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<td>Low Price</td>
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<td>P: $4m</td>
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22) Refer to Table 14-8. If the firms act out of individual self-interest, which prices will they select?  
A) Brawny Juice will select a high price, Power Fuel will select a low price.  
B) Both firms will select a low price.  
C) Brawny Juice will select a low price, Power Fuel will select a high price.  
D) Both firms will select a high price.

23) Refer to Table 14-8. Which of the following is true?  
A) Power Fuel does not have a dominant strategy.  
B) Power Fuel’s dominant strategy is to select a low price.  
C) Brawny Juice’s dominant strategy is to select a high price.  
D) Brawny Juice does not have a dominant strategy.

24) Refer to Table 14-8. If Brawny Juice selects a high price, what is Power Fuel’s best strategy and what will Power Fuel earn as a result of this strategy?  
A) Power Fuel will select a low price and earn $8 million.  
B) Power Fuel will select a low price and earn $16 million.  
C) Power Fuel will select a high price and earn $16 million.  
D) Power Fuel will select a high price and earn $12 million.

25) Refer to Table 14-8. If the firms cooperate, what prices will they select?  
A) Brawny Juice will select a low price; Power Fuel a high price.  
B) Both firms will select a low price.  
C) Both firms will select a high price.  
D) Brawny Juice will select a high price; Power Fuel a low price.
1) D  
2) A  
3) D  
4) C  
5) B  
6) A  
7) A  
8) C  
9) A  
10) D  
11) C  
12) C  
13) C  
14) D  
15) A  
16) D  
17) C  
18) D  
19) D  
20) A  
21) C  
22) B  
23) B  
24) B  
25) C