Please select the best answer for each of the following multiple-choice problems and mark your answer on the scantron provided. Make sure to write your name and the word “Micro” on the scantron. (Each problem is worth 3 points).

1. Currently John derives 2 units of utility from the consumption of chocolate, which costs $1, and 3 units of utility from the consumption of ice cream, which costs $1.5. What would John do if he were rational?
(a) Consume more ice cream and less chocolate
(b) Consume more chocolate and less ice cream
(c) Retain his current consumption basket
(d) Stop buying any ice cream

2. When the price of milk increases from $4 per gallon to $5 per gallon the quantity of milk consumed in the supermarket falls from 200 gallon to 160 gallons. What can you say about the price elasticity of demand for milk over this price range?
(a) It is inconsistent
(b) It is inelastic
(c) It is unitary
(d) It is elastic

3. Mark has an income elasticity of demand for restaurant meals of 1.50. By how much will Mark change is consumption of restaurant meals if his income increased from $50,000 to $75,000?
(a) He will increase it by 25%
(b) He will increase it by 50%
(c) He will increase it by 75%
(d) He will increase it by 150%

4. If the total variable cost is $80 and the total cost is $120, how many units are being produced if the average fixed cost is $5?
(a) 8 units
(b) 12 units
(c) 20 units
(d) 40 units
5. If hiring another worker increases production from 20 to 28 rings per hour and the wage rate of ring makers is $16 per hour, what approximately is the marginal cost of the additional rings?
(a) $2 per ring
(b) $4 per ring
(c) $8 per ring
(d) $16 per ring

6. Which of the following statements is NOT true about monopolistic competition?
(a) Firms do not make economic profit in the long run
(b) Firms produce homogenous goods
(c) There is easy entry and exist
(d) Firms are price searchers

Complete table 4-1, which shows the costs and revenues of a firm producing clocks in a perfectly competitive market, and use it to answer problems 7 and 8. Assume that each clock sells for $12 and that the total fixed cost is $10.

Table 4-1: A Perfect Competitor

<table>
<thead>
<tr>
<th>Unit</th>
<th>MC</th>
<th>MR</th>
<th>Revenue</th>
<th>TVC</th>
<th>TC</th>
<th>ATC</th>
<th>AVC</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. How much profit would this firm be making in the short run?
(a) $4
(b) $8
(c) $12
(d) $18

8. What is the average variable cost of the firm when it produces 6 units?
(a) $4
(b) $6
(c) $8
(d) $10

9. Which one of these events will decrease the profit-maximizing quantity for a firm in a perfectly competitive market?
(a) An increase in the demand for the good
(b) An increase in the fixed cost of producing the good
(c) An increase in the variable cost of producing the good
(d) A technological improvement that decreases the cost of producing the good
Use figure 4-1 (below), which shows the revenues and cost for a firm in a perfectly competitive market, to answer problems 10 and 11.

10. What can you say about this firm?
(a) It is making an economic loss and is unable to cover its variable cost
(b) It is making an economic loss, but is able to cover its variable cost
(c) It is making an economic profit
(d) It is breaking even

11. Which one of the points in figure 4-1 is the break-even point?
(a) Point A
(b) Point B
(c) Point C
(d) Point D

12. If an industry experiences constant economies of scale, what will happen to price in the short and long runs if the demand for the good increases?
(a) It will rise in the short run and then decrease, but will stay above the original price
(b) It will rise in the short run and then will fall back to the original price
(c) It will rise in the short run and then will fall below the original price
(d) It will rise in the short run and will rise further in the long run

13. All of these conditions make entry into an industry more difficult, EXCEPT:
(a) Economies of scales throughout the industry
(b) Low start-up cost
(c) Control of resources by existing firms
(d) Patents protection
Use figure 4-2 to answer problems 14 and 15:

14. Based on figure 3-1, what can be said about this monopolistic competitor?
(a) It is loosing money, but can still cover its variable cost
(b) It is just breaking even
(c) It is making economic profit
(d) It is losing money and can not cover its variable cost

15. Which of the following is most likely to happen to this monopolistic competitor in the long run?
(a) Its economic profit will increase
(b) It will increase its quantity
(c) Its marginal cost will rise
(d) It will decrease its price

16. Which one of these industries is most likely to be controlled by a monopoly?
(a) Cable service
(b) Car manufacturing
(c) Agricultural products
(d) Furniture manufacturing

17. A hotel gives discounts to senior citizens. The hotel is using:
(a) First-degree price discrimination
(b) Second-degree price discrimination
(c) Third-degree price discrimination
(d) Geo-social price discrimination
18. **What do a monopoly and a monopolistic competitor have in common?**  
(a) They both operate in industries with high barriers to entry  
(b) They both produce goods that have no close substitutes  
(c) They can both make economic profit in the long run  
(d) They are both price searchers  

19. **Which of the following conditions is likely to lead to the creation of a monopoly?**  
(a) Constant economies of scale throughout the industry  
(b) Strong anti-trust actions by the government  
(c) A patent with no close substitutes  
(d) Extremely low barriers to entry  

20. **Which one of these is a problem that a government may have if it tries to regulate a monopoly?**  
(a) It may be difficult to identify which companies truly are a monopoly  
(b) The monopoly will have the incentive to lie about its true costs  
(c) The demand that the monopoly faces may regularly change  
(d) All of the above  

21. **Which pair are the best examples of two substitutes in production?**  
(a) Computers and computer programmers  
(b) Bank tellers and ATMs  
(c) Nurses and doctors  
(d) Chicken and beef  

22. **When a monopoly hires their fourth worker, their production increases from 10 to 14 units and the price of the good decreases from $5 to $4. How much revenue does the fourth worker add to the company?**  
(a) $2  
(b) $4  
(c) $6  
(d) $10  

23. **Hiring another low skill worker will add 24 more units to production and hiring another high-skill worker will add 40 units to production. If low-skill workers have a wage rate of $8 per hour and high-skill workers have a wage rate of $20 per hour, what should this firm do?**  
(a) Hire more low-skill workers  
(b) Hire more high-skill workers  
(c) Hire more of both low and high skill workers  
(d) It does not matter what the firm does as long as it increases production
24. Which of the following is most likely to increase the wage of a job?
   (a) If the number of worker who are able to perform the job increases
   (b) If the job becomes more stressful to do
   (c) If the job becomes easier to perform
   (d) If the job becomes less dangerous

25. If a certain ethnic group earns a higher wage than another group this suggests:
   (a) That the group that earns less is discriminated against
   (b) That the group that earns more has more human capital
   (c) That the group that earns more works harder
   (d) All of the above are possible

26. Suppose that Eric buys a truck for $40,000. He then makes $10,000 by transporting cargo by the end of the first year, makes another $20,000 by the end of the second year and then sells the truck for $30,000. What is the present value of the truck if the interest rate is 5%?
   (a) $14,875
   (b) $17,664
   (c) $19,048
   (d) $20,000

27. How will an increase in the expected profit of firms affect the interest rate and the amount of loanable funds in the economy?
   (a) The interest rate and the amount of loanable funds will both rise
   (b) The interest rate and the amount of loanable funds will both fall
   (c) The interest rate will rise but the amount of loanable funds will fall
   (d) The interest rate will fall but the amount of loanable funds will rise

28. Suppose a bank extends 100 loans and it wants a REAL interest rate of 4%. If the bank expects 2% inflation and for 1% of the loans fail, what nominal interest rate should it charge?
   (a) 1%
   (b) 5%
   (c) 7%
   (d) 9%

29. If the interest rate is 8 percent, the net present value of an investment is $20,000 to be received in 2 years. What is the return on the investment in two years?
   (a) $20,800
   (b) $21,600
   (c) $23,200
   (d) $23,328
30. Which of the following is NOT a good example of government programs that helps reduce inequality?
(a) A progressive income tax
(b) Unemployment compensation
(c) Medicare and Medicaid
(d) Building airports

31. Which of the following statements is correct about the United States?
(a) People in the poorest quintile work harder that people in the richest quintile
(b) The percent of poor individual has increased since 1960
(c) The wealthiest quintile earns more that 45% of the income
(d) Income inequality has generally increased since 1980

32. A negative rate of time preference implies that an individual values:
(a) Receiving $5,000 now more than receiving $5,000 a year from now
(b) Receiving $5,000 now less than receiving $5,000 a year from now
(c) A safe investment more than a risky investment
(d) A risky investment more than a safe investment

*Use table 4-2, which represents a strategic game, to answer problem 33.*

<table>
<thead>
<tr>
<th>Player 2</th>
<th>Player 1</th>
<th>Cooperate</th>
<th>Defect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperate</td>
<td>($6, $5)</td>
<td>($9, $0)</td>
<td></td>
</tr>
<tr>
<td>Defect</td>
<td>($1, $8)</td>
<td>($3, $2)</td>
<td></td>
</tr>
</tbody>
</table>

33. If player 2 decides to defect, how much will player 1 loose if he decides to cooperate instead of defecting?
(a) $1
(b) $2
(c) $3
(d) $5
Use figure 4-3 to answer problems 34 and 35:

34. How many workers will this firm hire if the market wage rate is $6 per hour?
(a) 1 worker
(b) 2 workers
(c) 3 workers
(d) 4 workers

35. If the third worker adds 2 units to production, what price does this firm get for each of the units assuming that the firm is a price taker?
(a) $6
(b) $4
(c) $3
(d) $2

36. What was the most fun thing about this class [Hint: This is your friendly give-away question – it’s worth 2 automatic points.]?
(a) Being able (or compelled) to wear a sweater in the middle of the summer
(b) Waking up early enough to feel the morning breeze
(c) Knowing that one day this class will be over
(d) Answering these idiotic give-away questions