Exam 2

ECON 101-002

Summer 2017

Name: _____

ONYEN: _____

PID: _____

Honor Code Signature: _____

Directions: Choose the option that best answers the question given.

1. Sunnyside Eggs is a firm in a perfectly competitive market. If the firm produces 15,000 eggs, the marginal cost of production will equal the price of eggs, which is \$2.00. At this quantity the firm would incur total fixed costs of \$10,000 and total variable costs of \$35,000. Given this, in the short-run the firm should _____and make _____profit.

    (a) shut down; negative

    (b) shut down; zero

    (c) stay open; negative

    (d) stay open; positive

2. Stella's Nail Salon provided 100,000 haircuts last year with a total variable cost of \$800,000. If the average fixed cost of the haircuts was \$5, what was the company's average total cost of the haircuts last year?

    (a) Exactly \$8

    (b) Less than \$8

    (c) More than \$10

    (d) More than \$8, but less than \$10

3. For a firm in a monopolistically competitive market, which of the following accurately describes the relationship between the price, average total cost, and marginal cost in the long run?

    (a) $P = ATC = MC$

    (b) $P > ATC = MC$

    (c) $P = ATC > MC$

    (d) $P > ATC > MC$

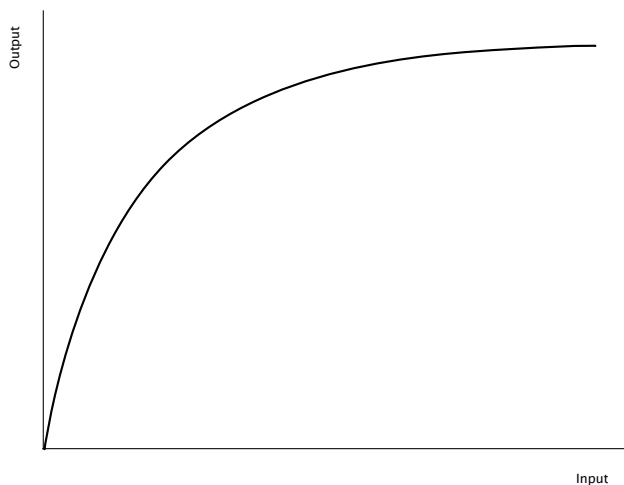4. Consider Figure 1, which shows the production function for a firm that makes frozen bananas.

Figure 1: Bluth's Production Function

Assume that the firm's only input is labor. Which of the following statements is TRUE?

(a) The production function exhibits economies of scale.

(b) The production function exhibits increasing marginal product of labor.

(c) The production function exhibits constant returns to scale.

(d) The production function exhibits diminishing marginal product of labor.

(e) The production function exhibits diseconomies of scale.

5. If the prices of all goods and services produced in the economy rose while the quantity of all goods and services remained the same, which would rise?

(a) Nominal GPD, but not real GDP

(b) Both nominal and real GDP

(c) Real GDP, but not nominal GDP

(d) Neither nominal nor real GDP

6. Which of the following is not an example of a barrier to entry?

(a) A pharmaceutical company obtains a patent for a new medication to treat migraine headaches.

(b) A soybean farmer is the first in her country to use a new brand of fertilizer.

(c) A taxi cab driver in New York City must obtain a license to legally provide transportation in the city.

(d) Microsoft obtains a copyright for its Windows operating system.

Al's Burgers is a firm in a perfectly competitive market and faces the cost structure shown in Figure 2. Use this information for questions 7-8.
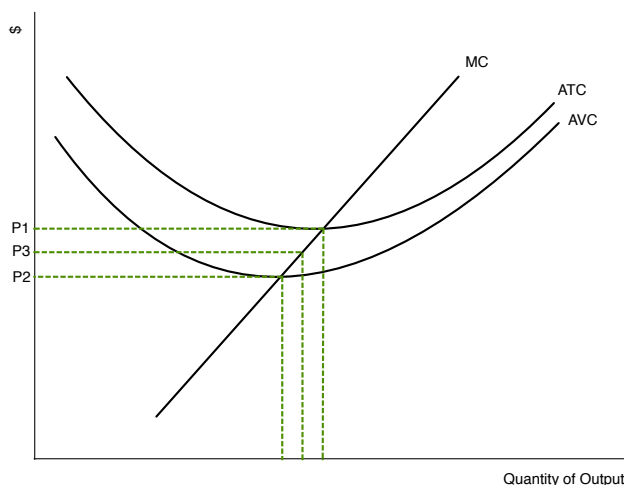

Figure 2: Market for Fanta

7. Al's Burgers is currently making a profit $\Pi > 0$. Given this, the market price for burgers must be

    (a) greater than P1.

    (b) less than P2.

    (c) greater than P3 but less than P1.

    (d) greater than P2 but less than P3.

8. In the long-run, the price of burgers will be _____and Al will produce a _____ quantity burgers than they currently produce in the short-run.

    (a) P1; smaller

    (b) less than P2; smaller

    (c) P2; smaller

    (d) more than P1; greater

    (e) greater than P2 but less than P1; greater

A firm is currently in a market with the conditions outlined in Table 1. The firm has fixed costs of $1,500 per day. Use this information to answer questions 9-10.

Table 1: Market Environment

Quantity/day	Total Revenue	Marginal Cost
1	$600	$1,000
2	$1,200	$400
3	$1,800	$500
4	$2,400	$600
5	$3,000	$800

9. If the firm produces 4 units of output, its total variable costs would be

    (a) $2,000

    (b) $500

    (c) $167

    (d) $1,900

    (e) $2,500

10. In the short-run, the firm should _____. Moreover, in the long-run the firm will _____.

    (a) continue to operate in the short-run and produce 5 units of output in order to maximize profits; remain in the market

    (b) shutdown in the short-run and produce 0 units of output in order to maximize profits; remain in the market

    (c) continue to operate in the short-run and produce 4 units of output in order to maximize profits; exit the market

    (d) shutdown in the short-run and produce 0 units of output in order to maximize profits; exit the market

    (e) continue to operate in the short-run and produce 4 units of output in order to maximize profits; remain in the market

11. How many of the following statements regarding perfectly competitive markets are TRUE?

    i. Perfectly competitive markets are characterized by many buyers and sellers.

    ii. In the long-run, firms in perfectly competitive markets operate at the quantity that minimizes average total costs.

    iii. Firms in perfectly competitive markets are price takers and each individual firm faces a perfectly elastic demand curve.

    iv. In the long-run, the process of entry and exit drives the profits of firms in perfectly competitive markets to zero.

    (a) 3

    (b) 0

    (c) 2

    (d) 4

    (e) 1

12. A family in Ireland purchases leather loafers that were produced by a shoemaker in Italy. As a result of this transaction, GDP in Ireland _____ and GDP in Italy _____.

    (a) increases; remains unchanged

    (b) remains unchanged; increases

    (c) decreases; increases

    (d) increases; increases

    (e) increases; remains unchanged

13. A monopolistically competitive firm will increase its production if at current production levels the

    (a) marginal revenue is greater than the average total cost.

    (b) price is greater than the average total cost.

    (c) marginal revenue is greater than the marginal cost.

    (d) price is greater than the marginal cost.

14. Consider the simultaneous move game between Key and Peele shown below, where the first number in each block is the payoff to Key and the second is the payoff to Peele.

		Peele	
		Left	Right
Key	Top	6, 4	x, 2
	Bottom	1, 3	5, y

    If "Top" is the dominant strategy for Key and "Left" is the dominant strategy for Peele, then possible values of x and y are

    (a) $x = 4$ and $y = 2$.

    (b) $x = 6$ and $y = 4$.

    (c) $x = 6$ and $y = 2$.

    (d) $x = 4$ and $y = 4$.

15. A bag of sugar is sold to Coca Cola for $0.50, which uses this sugar to make Sprite that is sold to consumers for $1.25. Another bag of of sugar is sold to Food Lion for $1.25, where it is sold to consumers for $2.75. Together, these transactions have what effect on GDP?

    (a) Increase GDP by $4.00

    (b) Increase GDP by $1.75

    (c) Increase GDP by $5.75

    (d) Increase GDP by $3.00

16. Firms in monopolistically competitive markets are similar to monopolies in that they both _____and are similar to firms in perfectly competitive markets in that they both _____.

    (a) are price makers; produce at the efficient quantity

    (b) make positive profits in the short and long run; produce at the minimum of ATC in the long run

    (c) are in markets with barriers to entry; make zero economic profit in the long run

    (d) charge a price above the marginal cost; can freely enter and exit the market

17. If there is an increase in the price of blueberries that causes consumers to purchase fewer pounds of blueberries and more pounds of strawberries, but the "typical basket" used to calculate the CPI remains the same, the CPI will suffer from

    (a) substitution bias.

    (b) bias due to the introduction of new goods.

    (c) bias due to unmeasured quality change.

    (d) base-year bias.

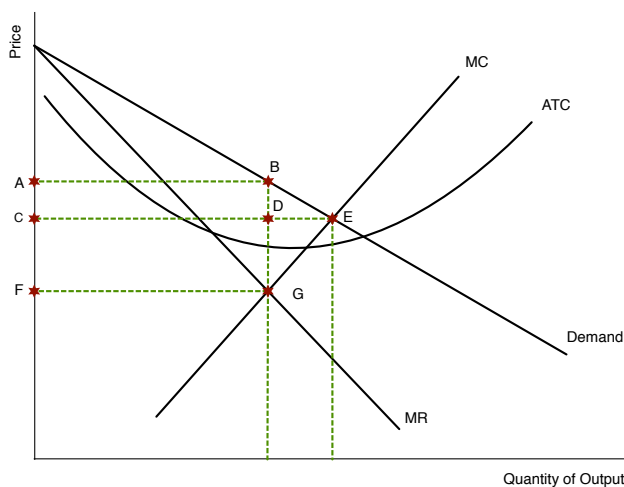Use Figure 3, which represents the environment faced by a monopoly, for questions 18 - 19.

Figure 3: Monopolist Environment

18. Charging the price _____maximizes the monopolist's profit, while total surplus would be maximized at price _____.

    (a) C; A

    (b) A; C

    (c) F; C

    (d) A; F

19. Which of the following distances represents the mark-up over marginal cost at the profit maximizing quantity?

    (a) Distance BG

    (b) Distance AC

    (c) Distance DE

    (d) Distance CF

20. In 2014, an economy produced 100 apples that were sold for $1.50 each and 125 oranges for $2 each. The next year, the economy again produced 100 apples, but for $1.25 each, and 140 oranges for $2.25. Using 2014 as the base year, the GDP deflator in 2014 is _____, while the GDP deflator in 2015 is _____.

     (a) 98; 100

     (b) 102; 100

     (c) 100; 102

     (d) 100; 98

Table 2 shows the prices and quantities produced of the only two goods in Uzbeki-beki-beki-Stan-Stan, grapes and olives, for the years 2000 and 2001. Assume 2000 is the base year. Use this information for questions 21-22.

Table 2: Grapes and Olives in UZN

Year	Grapes Produced	Price of Grapes	Olives Produced	Price of Olives
2000	20	$2.10	25	$4.10
2001	20	x	25	y

21. In 2001, the value of real GPD

     (a) is greater than real GDP in 2000.

     (b) is equal to real GDP in 2000.

     (c) is less than real GDP in 2000.

     (d) cannot be determined from this information.

22. If nominal GDP was greater in 2000 than in 2001, how many of the following statements *could* account for this?

   (i) $x = \$2.00$ and $y = \$4.10$

  (ii) $x = \$2.10$ and $y = \$4.40$

 (iii) $x = \$2.20$ and $y = \$4.10$

 (iv) $x = \$2.10$ and $y = \$3.90$

     (a) 0

     (b) 1

     (c) 3

     (d) 2

     (e) 4

23. Which of the following regarding the relationship between average total costs and marginal costs is TRUE?

   (a) If marginal costs are greater than average total costs, then it must be that average total costs are increasing.

   (b) If marginal costs are greater than average total costs, then it must be that marginal costs are decreasing.

   (c) If marginal costs are greater than average total costs, then it must be that average total costs are decreasing.

   (d) If marginal costs are less than average total costs, then it must be that marginal costs are decreasing.

24. Consider the game matrix below.

		Isabella		
		Run	Walk	Crawl
Noah	Run	4, 1	4, 4	1, 2
	Walk	3, 4	1, 3	3, 2
	Crawl	2, 4	2, 3	4, 6

How many Nash Equilibria does this game have?

   (a) 4 or more
   (b) 1
   (c) 0
   (d) 3
   (e) 2

25. How many of the following transactions would affect the consumption component of US GDP? Assume all of the transactions occur within the United States.

   (i) A family buys a new refrigerator.
   (ii) Jane purchases a used bookshelf from a friend.
   (iii) Jane's brother gets a haircut from his favorite barber.
   (iv) A newly-wed couple buys a newly constructed home.

   (a) 1
   (b) 0
   (c) 3
   (d) 2
   (e) 4

26. *The New York Times* cost \$0.15 in 1970 and \$0.75 in 2000. If average wages in the US were \$3.23 per hour in 1970 and \$14.32 in 2000, then the purchasing power of workers in terms of *NYT* newspapers

    (a) was greater in 2000 than in 1970 because the average worker could purchase more newspapers in 2000 than in 1970.

    (b) was equal in 1970 and 2000 because the average worker could purchase the same number of newspapers in 2000 as in 1970.

    (c) was greater in 1970 than in 2000 because the average worker could purchase more newspapers in 1970 than in 2000.

    (d) impossible to discern without more information.

27. If a competitive firm were to double the quantity of output it sells, its

    (a) profits must increase.

    (b) marginal revenue must double.

    (c) total revenue must double.

    (d) marginal cost must double.

28. The price of large manufacturing machines declines. As a result, the GDP deflator _____ and the CPI _____.

    (a) does not change; decreases

    (b) does not change; does not change

    (c) decreases; decreases

    (d) decreases; does not change

29. A firm is able to produce 165 units of output per day when 15 workers are hired. Additionally, the firm is able to produce 176 units of output per day when 16 workers are hired (holding other inputs fixed). The marginal product of the 16th worker is

    (a) 10 units.

    (b) 16 units.

    (c) 11 units.

    (d) 176 units.

30. A monopoly is an inefficient way to produce a product because

    (a) monopolies produce too much of a good at too high of a price and thus will have inefficient transactions.

    (b) monopolies produce too little of a good at too low of a price thus will have unrealized gains from trade.

    (c) monopolies produce too much of a good at too low of a price thus will have inefficient transactions.

    (d) monopolies produce too little of a good at too high of a price thus will have unrealized gains from trade.

31. Which of the following is true regarding the relationship between the <u>output</u> produced by a monopoly, an oligopoly acting as a cooperative cartel, an oligopoly that is not cooperative, and a perfectly competitive (PC) firm?

    (a) monopoly < cooperative cartel < non-cooperative oligopoly < PC firm

    (b) monopoly = cooperative cartel < non-cooperative oligopoly < PC firm

    (c) monopoly < cooperative cartel < non-cooperative oligopoly = PC firm

    (d) monopoly = cooperative cartel = non-cooperative oligopoly < PC firm

32. Which of the following is true regarding the relationship between the <u>price</u> charged by a monopoly, an oligopoly acting as a cooperative cartel, an oligopoly that is not cooperative, and a perfectly competitive (PC) firm?

    (a) monopoly > cooperative cartel > non-cooperative oligopoly > PC firm

    (b) monopoly = cooperative cartel > non-cooperative oligopoly > PC firm

    (c) monopoly > cooperative cartel > non-cooperative oligopoly = PC firm

    (d) monopoly = cooperative cartel = non-cooperative oligopoly > PC firm

33. Raymond left his job as a stock broker where he was earning $70,000 a year to start a cookie business. Over the past year, Raymond sold 50,000 boxes of cookies at a price of $4.00 per box. Also, over the course of the year, Raymond incurred labor costs of $60,000 and paid $20,000 for raw materials. Raymond's <u>accounting</u> profit for the year was

    (a) $70,000.

    (b) $120,000.

    (c) $50,000.

    (d) $80,000.

34. The goal of a firm in perfect competition is to maximize _____, while the goal of a monopolist firm is to maximize _____.

    (a) profit; profit

    (b) profit; total surplus

    (c) total surplus; profit

    (d) total surplus; total surplus

35. The expenditure approach to GDP adds together

    (a) consumption spending, investment spending, government purchases, and net exports.

    (b) consumption spending, firm profits, government purchases, and net exports.

    (c) wages and salaries, rent, interest, and firm profits.

    (d) consumption, interest, government purchases, net exports, wages and salaries, rent, investment, and firm profits.

36. Refer to Table 3.

Table 3: CPI and Minimum Wages

Year	CPI	Minimum Wage
1983	100.0	$3.35
1984	103.9	$3.35
1985	107.6	$3.35
1986	109.6	$3.35
1987	113.6	$3.35
1988	118.3	$3.35
1989	124.0	$3.35
1990	130.7	$3.80

Given this information, which of the following statements are TRUE?

(i) The standard of living for minimum-wage workers remained the same between 1985 and 1989 because the minimum wage remained the same.

(ii) The standard of living for minimum-wage workers was higher in 1990 than in 1987 because a minimum wage worker's purchasing power was greater in 1990.

    (a) Neither i or ii

    (b) Only ii

    (c) Both i and ii

    (d) Only i

37. If a firm faces multiple demand curves for their good (e.g., older individuals have a greater willingness to pay than younger individuals), but cannot perfectly price discriminate, imperfect price discrimination would

    (a) never be used because the firm's profits will be higher if they charge one price to all consumers.

    (b) be used if possible because a firm's profits are always greater if they price discriminate.

    (c) never be used because price discrimination in any form is illegal.

    (d) be used if possible because it will always increase total surplus in the market.

38. The market for soybeans is perfectly competitive. It follows that the demand curve faced by any individual soybean producer for their output is

    (a) perfectly elastic.

    (b) unit elastic.

    (c) downward sloping.

    (d) perfectly inelastic.

Table 4 shows the prices and quantities consumed in some country. Assume that the typical basket of beef and pork was in determined 2014 and this is the base year. Use this information to answer questions 39-40.

Table 4: Beef & Pork

Year	Price of Beef	Quantity of Beef	Price of Pork	Quantity of Pork
2014	$2.00	100	$1.00	100
2015	$2.50	90	$0.90	120
2016	$2.75	105	$1.00	130

39. What is the value of the CPI in 2015 (rounded to the nearest whole number)?

     (a) 125

     (b) 333

     (c) 300

     (d) 113

     (e) 133

40. Using the CPI, what was the inflation rate between 2014 and 2015 (rounded to the nearest whole number)?

     (a) -10%

     (b) 13%

     (c) 10%

     (d) -13%