

Econ 1
Second Midterm
November, 2007

We will award 5 points for doing the following correctly. FILL IN THE BUBBLES on your scantron for your **name**, your **perm number**, and the **test form type**. Use **pencil only**. All bubbles must be completely filled in.

Each correct answer is worth 5 points. Answers left blank are worth 2 points. Wrong answers are worth 0 points.

True-False Questions: Fill in Bubble A for True, Bubble B for False.

1. Suppose that the supply curve for a good is perfectly inelastic, and when there is no tax the equilibrium price for this good is \$50. In competitive equilibrium, if the government introduces a sales tax of \$20 per unit which is collected from buyers, the profits of suppliers will fall and the total consumers' surplus of demanders will be unchanged.
2. A laborer who is unemployed but would like to work at the current wage is said to be voluntarily unemployed.
3. A profit-maximizing firm will always want to hire the number of workers that gives it the highest average profit per worker.
4. Competitive equilibrium theory tells us that a legal minimum wage that is lower than the competitive equilibrium wage will cause wages to fall below the competitive equilibrium wage level.
5. If the demand curve for labor is elastic, a minimum wage that is set higher than the equilibrium wage will decrease total labor income.
6. To maximize its profits, a firm should hire the number of workers that maximizes the marginal value product of labor.
7. If the cost of producing one more unit is lower than the price at which a monopolist is currently selling its output, then the monopolist will increase its profits by selling one more unit.

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8. If the demand curve slopes down, then the sum of demanders' profits and suppliers' profits will be higher if the market is competitive than if the only seller is a monopolist who does not price discriminate.
9. A monopolist will choose an output equal to the quantity at which the demand curve intersects the marginal cost curve.
10. In the short run, a profit-maximizing firm will supply nothing if the price is below its average total cost.
11. Ed's bakery can sell as many loaves of bread as it wishes for a price of \$1 per loaf. To keep calculations simple, let us assume that Ed's only costs are hired labor. If Ed hires 1 worker, he can produce 300 loaves of bread per day. If he hires 2 workers, he can produce 450 loaves of bread per day. If he hires 3 workers, he can produce 550 loaves of bread per day. If he hires 4 workers, he can produce 610 loaves of bread per day. If he hires 5 workers, he can produce 650 loaves of bread per day, and if he hires 6 workers, he can produce 670 loaves of bread per day. If he hires 7 or more workers, he can still produce only 670 loaves of bread per day. If Ed increases his work crew from 4 workers to 5 workers, his daily revenue will increase by:
- (a) \$100
 - (b) \$40
 - (c) \$60
 - (d) \$20
 - (e) \$120
12. (Hint: Remember that each loaf of bread is worth \$1.) If each worker that Ed hires must be paid a daily wage of \$25, how many workers should he hire per day to maximize his profits?
- (a) 5
 - (b) 4
 - (c) 6
 - (d) 7
 - (e) 3

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13. The supply function for rutabagas is described by the equation $Q = P/5$ where P is the price of rutabagas and Q is the amount that will be supplied at price P . The demand function is described by the equation $Q = 224 - 11P$ where P is the price of rutabagas and Q is the amount that will be demanded. What is the competitive equilibrium PRICE of rutabagas?
- (a) $P = 27$
 - (b) $P = 40$
 - (c) $P = 20$
 - (d) $P = 17$
 - (e) $P = 43$
14. (This question is a continuation of the previous question.) Consumers of rutabagas are trying to persuade Congress that the competitive equilibrium price of rutabagas is too high and that Congress should pass a law making it illegal to buy or sell rutabagas at a price higher than 15. If this law were passed, at the legal maximum price,
- (a) supply of rutabagas would exceed demand by 56 units.
 - (b) demand for rutabagas would exceed supply by 56 units.
 - (c) supply would equal demand at the legal maximum price.
 - (d) there would be both excess demand and excess supply.
 - (e) demand for rutabagas and supply of rutabagas would both fall by 56 units.
15. In the rental housing market in the town of Enchilada Grande, the price elasticity of demand is -3 and the price elasticity of supply is 1 . The market is currently in competitive equilibrium. A rent-control ordinance is proposed which would set the maximum rent at a rate 20% lower than the current rate. If this proposal is adopted
- (a) the demand curve in Enchilade Grande would shift down by 60%.
 - (b) the supply curve in Enchilade Grande would shift down by 20%.
 - (c) the demand curve in Enchilade Grande would shift up by 60%.
 - (d) the demand curve in Enchilade would shift up by 80%.
 - (e) none of the above.

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16. If the rent-control ordinance is adopted in Enchilada Grande, then the number of housing units that are actually rented will
- (a) increase by 60%.
 - (b) increase by 20%.
 - (c) decrease by 20%.
 - (d) decrease by 60%.
 - (e) not change.
17. A firm can hire any number of workers between 1 and 6. The value of a firm's output is \$11 if it hires one worker, \$17 if it hires 2 workers, \$23 if it hires 3 workers, \$28 if it hires 4 workers, \$32 if it hires 5 workers, and \$35 if it hires 6 workers. The highest wage at which this firm would be willing to hire 5 workers is
- (a) \$4
 - (b) \$7
 - (c) \$6.40
 - (d) \$5
 - (e) \$4.25
18. A monopolist is currently selling 100 units of its product at \$1000 per unit. If it cuts its price to \$999, it will be able to sell 101 units. What is the firm's marginal revenue from selling its 101st unit? (Pick the closest answer.)
- (a) \$999
 - (b) \$899
 - (c) \$100
 - (d) \$ - 999
 - (e) \$100

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19. A profit-maximizing firm in a competitive market has fixed costs of \$3,500 and variable costs of \$60 per unit sold. It has a capacity of 50 units of output. In the short run it can not avoid its fixed costs. In the long run it could avoid its fixed costs by shutting down. In the short run, this firm
- (a) will supply no output at prices below \$60 and will supply 50 units at prices above \$60.
 - (b) will supply no output at prices below \$130 and will supply 50 units at prices above \$130.
 - (c) will supply no output at prices below \$60, will supply 25 units at prices between \$60 and \$130, and will supply 50 units at prices above \$130.
 - (d) will supply 50 units at any price above 0.
 - (e) will have a supply curve that is an upward-sloping straight line passing through the origin, with slope 6.
20. In the long run, the profit-maximizing firm described in the previous question would be able to avoid its fixed costs by shutting down and producing zero output. In the long run, this firm
- (a) will supply no output at prices below \$60 and will supply 50 units at prices above \$60.
 - (b) will supply no output at prices below \$130 and will supply 50 units at prices above \$130.
 - (c) will supply 50 units of output at any price above 0.
 - (d) will supply no output at prices below \$60, will supply 25 units at prices between \$60 and \$130, and will supply 50 units at prices above \$130.
 - (e) will have a supply curve that is an upward-sloping straight line passing through the origin, with slope 6.