

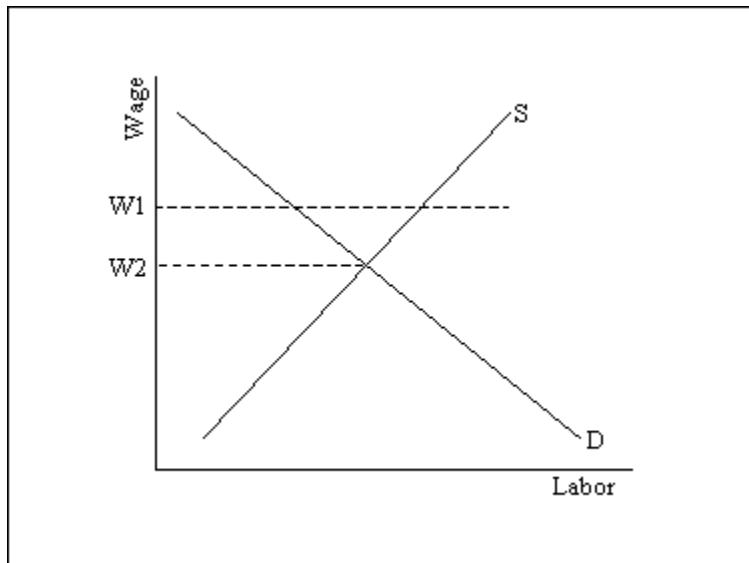
1. According to the law of diminishing marginal returns:
  - a) the marginal product of labor is negative.
  - b) the average product of labor is negative.
  - c) as more labor is added to a fixed stock of capital, less output is produced.
  - d) as more labor is added to a fixed stock of capital, the marginal product of labor eventually will decline.
  
2. Suppose workers in labor market X are qualified to work in an alternative labor market Y and vice-versa. If an increase in labor demand causes an increase in the wage rate to workers in market Y, this will tend to:
  - a) increase labor supply and reduce the wage rate in X.
  - b) increase labor demand and reduce the wage rate in X.
  - c) reduce labor supply and increase the wage rate in X.
  - d) reduce labor demand and reduce the wage in X.
  
3. As a result of an increase in the market supply of labor, suppose the wage rate falls by 10%. After adjusting their employment levels, firms in the market find that their total wage bills ( $=W \times L$ ) have increased. This result indicates that:
  - a) labor demand is inelastic over this range of wage rates.
  - b) labor demand is elastic over this range of wage rates.
  - c) labor demand, was inelastic at the old wage, but is elastic at the new, higher wage.
  - d) labor demand, was elastic at the old wage, but is inelastic at the new, higher wage.
  
4. A monopsonist tends to hire too \_\_\_\_\_ workers because:
  - a) few; marginal revenue product exceeds the value of marginal product.
  - b) few; marginal wage costs exceeds the wage rate.
  - c) many; marginal revenue product exceeds the value of marginal product.
  - d) many; marginal wage costs exceeds the wage rate.

Questions 5 - 7 refer to the table below.

| <u>Labor</u> | <u>Output</u> | <u>Price (D<sub>1</sub>)</u> | <u>Price (D<sub>2</sub>)</u> |
|--------------|---------------|------------------------------|------------------------------|
| 0            | 0             | \$10.00                      | \$10.00                      |
| 1            | 15            | 10.00                        | 9.50                         |
| 2            | 29            | 10.00                        | 9.00                         |
| 3            | 42            | 10.00                        | 8.50                         |
| 4            | 54            | 10.00                        | 7.50                         |
| 5            | 65            | 10.00                        | 6.50                         |
| 6            | 75            | 10.00                        | 5.50                         |

5. Suppose product demand is given by the column labeled D<sub>1</sub>. The value of the marginal product of the fourth worker is \_\_\_\_\_.
  
6. Suppose product demand is given by the column labeled D<sub>1</sub>. If the wage rate is \$110, the firm will achieve maximum profit by hiring \_\_\_\_\_ workers.
  
7. Suppose product demand is given by the column labeled D<sub>2</sub>. If the wage rate rises from \$90 to \$120, the firm will reduce the quantity of labor employed by \_\_\_\_\_ unit(s).

Questions 8 and 9 refer to the following diagram.



8. At wage rate  $W_1$  there is an:
- excess supply of labor and the wage rate will fall
  - excess supply of labor and the wage rate will rise
  - excess demand for labor and the wage rate will fall
  - excess demand for labor and the wage rate will rise
9. For the supply and demand curves in the diagram, the level of employment will be highest at:
- wage rate  $W_1$
  - a wage rate higher than  $W_1$
  - wage rate  $W_2$
  - a wage rate lower than  $W_2$
10. A union will most likely attempt to restrict the growth of labor supply if:
- the labor supply curve is very inelastic
  - the labor demand curve is very inelastic
  - there is a very slow rate of growth of labor demand
  - there is a very elastic supply of a production substitute for union labor
11. The employer's share of the Social Security and Medicare components of the payroll tax has increased, from 6.13% in 1980 to its current rate of 7.65%. Because employers pay no payroll tax on many fringe benefits, this change in tax rates has effectively:
- reduced the "price" of fringe benefits, rotating the wage-fringe isoprofit line inward
  - increased the "price" of fringe benefits, rotating the wage-fringe isoprofit line inward
  - reduced the "price" of fringe benefits, rotating the wage-fringe isoprofit line outward
  - increased the "price" of fringe benefits, rotating the wage-fringe isoprofit line outward
12. The principal-agent problem arises primarily because:
- principals and agents work in a team, leading to free-rider problems
  - principals and agents have common interests
  - principals pursue some of their own objectives that may conflict with the objectives of the agents
  - agents pursue some of their own objectives that may conflict with the objectives of the principals
13. Raises and promotions are used by employers as a device to:
- reduce shirking by salaried workers
  - transform labor from a quasi-fixed to a variable resource
  - reduce turnover by hourly workers
  - reduce free-riding by teams of workers

Questions 14 and 15 refer to the following information. There are initially 28 workers in market A and 63 workers in market B. All markets are assumed competitive; A and B are identical in all nonwage aspects.

| $L_A$ | $VMP_A$ |  | $L_B$ | $VMP_B$ |
|-------|---------|--|-------|---------|
| 25    | 10.00   |  | 60    | 12.00   |
| 26    | 9.50    |  | 61    | 11.50   |
| 27    | 9.00    |  | 62    | 11.00   |
| 28    | 8.50    |  | 63    | 10.50   |
| 29    | 8.00    |  | 64    | 10.00   |
| 30    | 7.50    |  | 65    | 9.50    |
| 31    | 7.00    |  | 66    | 9.00    |

14. Given the initial situation (assuming perfect information and costless migration) which one of the following may be expected to occur?

- a) Workers will migrate from A to B
- b) Workers will migrate from B to A
- c) There will be no migration of workers
- d) A migration pattern cannot be determined from the information

15. After all adjustments to equilibrium take place in this market, we expect to find that:

- a) the total value of output is increased, but economic efficiency is reduced
- b) both the total value of output and economic efficiency are increased
- c) both the total value of output and economic efficiency are reduced
- d) changes in the total value of output and economic efficiency cannot be determined

16. The proprietor of a small business is considering expanding her production by hiring either her semi-skilled 18 year old daughter or her unskilled 16 year old son. The daughter will be able to produce 14 units per hour, while the son only 12. Comparing earnings of their friends, the proprietor determines that out of fairness the daughter would have to be paid \$4 per hour and the son \$3.50 per hour. A third option would be to hire both of them, but the small workspace would have to be shared, and output for the two would then be just 24 units per hour. Answer the following questions assuming that the proprietor is interested only in maximizing profits.

a) If the product sells for 29 cents per unit, which of the two family members will the proprietor hire? Explain (in other words, state and explain the hiring rule for a profit-maximizing employer).

b) Suppose that, upon having made the choice in part (a), the firm experiences an increase in the product price to 34 cents. Will it now be profitable to add the other family member to its workforce? Explain.