Multiple choice questions (23 x 3= 69 points )

1. In the market for labor, the price of labor is the:
   A) same as price of the product produced by the labor.
   B) real wage.
   C) marginal product of labor.
   D) number of hours employed per year.
   E) number of workers employed per year.

2. The demand for labor depends on ______ and ______.
   A) the supply of labor; the marginal product of labor
   B) the supply of labor; the price of output produced
   C) the rate of price inflation; the price of the output produced
   D) the rate of price inflation; the marginal product of labor
   E) the marginal product of labor; the price of output produced

3. According to the principle of diminishing returns to labor, if the amount of capital and other inputs are held constant, employing additional workers:
   A) increases output at an increasing rate.
   B) increases output at a constant rate.
   C) increases output at a decreasing rate.
   D) decreases output at an increasing rate.
   E) decreases output at a decreasing rate.

4. The principle of diminishing returns to labor is based on the:
   A) scarcity principle.
   B) cost-benefit principle.
   C) principle of comparative advantage.
   D) equilibrium principle.
   E) principle of increasing opportunity cost.

5. High Tech, Inc. produces plastic chairs that sell for $10 each. The following table provides information about how many plastic chairs can be produced per hour. For simplicity assume that labor is the only input.

<table>
<thead>
<tr>
<th>Number of Workers</th>
<th>Chairs Produced per Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
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<tr>
<td>3</td>
<td>24</td>
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<tr>
<td>4</td>
<td>28</td>
</tr>
<tr>
<td>5</td>
<td>30</td>
</tr>
</tbody>
</table>

   How many workers will be hired, if the hourly wage for workers is $50?
   A) 1  B) 2  C) 3  D) 4  E) 5

6. The introduction of a new technology that increases the productivity of labor will:
   A) increase the supply of labor.
   B) decrease the demand for labor.
   C) increase the demand for labor.
   D) decrease the supply of labor.
   E) decrease the marginal product of labor.

7. If the price of TVs produced by the XYZ-TV Company falls from $1,000 to $750 per TV set, then the:
   A) supply of labor to the XYZ-TV Company increases.
B) supply of labor to the XYZ-TV Company decreases.
C) demand for labor by the XYZ-TV Company increases.
D) demand for labor by the XYZ-TV Company decreases.
E) marginal product of labor employed by the XYZ-TV Company decreases.

8. Holding other factors constant, if a larger proportion of the population enters the labor force as a result of a growing social acceptance of women working, then the real wages of workers will _____ and employment of workers will _____.
A) increase; increase D) decrease; decrease
B) increase; decrease E) decrease; increase
C) decrease; not change

9. Holding other factors constant, if the education and skills of the typical worker in an economy increases, then the real wages of workers will _____ and employment of workers will _____.
A) increase; increase D) decrease; decrease
B) increase; decrease E) decrease; increase
C) decrease; not change

10. A sharp increase in the price of beef that causes consumers to switch to chicken is predicted to _____ the real wage and ____ employment of unskilled workers in a poultry processing plant.
A) increase; increase D) decrease; decrease
B) increase; decrease E) decrease; not change
C) increase; not change

11. If unskilled workers in poultry processing plants unionize, then the real wage of unskilled workers in poultry processing plants is predicted to ____ and the employment of unskilled workers in poultry processing plants is predicted to _____.
A) increase; increase D) decrease; decrease
B) increase; decrease E) decrease; not change
C) increase; not change

12. The two most important factors contributing to increased productivity in industrialized countries in the twentieth century were:
A) higher relative prices and a larger labor supply.
B) higher relative prices and technological progress.
C) technological progress and increases in the capital stock.
D) technological prices and increases in the labor supply.
E) a larger labor supply and a larger capital stock.

13. A war destroys much of the capital stock in the country of Omega. Holding other factors constant, as a result the real wage in Omega _____ and employment in Omega _____.
A) increases; increases D) decreases; decreases
B) increases; decreases E) decreases; decreases
C) increases; does not change

14. A plague causes the deaths of a large proportion of the working-age population in the country of Alpha. As a result the real wage in Alpha _____ and employment in Alpha _____.
A) increases; increases D) decreases; increases
B) increases; decreases E) decreases; decreases
C) increases; does not change

15. Slower real wage growth since the 1970s accompanied by rapid job growth can be explained by:
A) skill-biased technological change.
B) globalization.
C) a productivity slowdown accompanied by an increase in the labor supply.
D) a productivity slowdown accompanied by a decrease in the labor supply.
E) the impact of minimum-wage laws and unions.

16. Initially workers in the shoe industry and the computer industry earn the same wage. Reductions in trade barriers give domestic consumers access to cheaper shoes produced abroad, so domestic shoe prices fall. At the same time foreign consumers purchase more computers, raising the relative price of computers. As a result of these changes wages in the shoe industry ____ and wages in the computer industry ____.
A) increase; increase D) decrease; do not change
B) increase; decrease E) decrease; decrease
C) decrease; increase

17. An increase in the demand for workers producing computers for export versus producing agricultural products that can be imported more cheaply from abroad is an example of how increasing wage inequality can result from:
A) the diminishing marginal product of labor. D) skill-biased technological change.
B) the diminishing marginal product of capital. E) globalization.
C) increasing reservation prices.

Use the following to answer questions 18-19:

<table>
<thead>
<tr>
<th>Wages per hour</th>
<th>Labor Supply</th>
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<tbody>
<tr>
<td>$12</td>
<td></td>
</tr>
<tr>
<td>$10</td>
<td></td>
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<tr>
<td>$7</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Workers Employed</th>
</tr>
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<tbody>
<tr>
<td>80 85 100 107 115</td>
</tr>
</tbody>
</table>

18. Based on the figure, if a union contract requires that workers be paid $10 per hour, there will be ____ unemployed workers.
A) 14 B) 22 C) 27 D) 29 E) 39

19. Based on the figure, if a union contract requires that workers be paid $12 per hour, there will be ____ unemployed workers.
A) 14 B) 22 C) 27 D) 29 E) 35

20. Which of the following factors explains the substantial growth in real wages in the twentieth century?
A) large increases in the labor supply  D) large increases in productivity
B) skill-biased technological change   E) minimum-wage laws
C) globalization

21. Larger increases in the demand for labor than in the supply of labor explain:
A) the substantial increase in real wages.     D) skill-biased technological change.
B) the slowdown in real wage growth.  E) double-digit rates of unemployment.
C) increasing wage inequality.
22. Increased international trade increases the demand for a country's exports, _____ the demand for workers in export industries, and _____ their wages.
   A) increases; increases
   B) increases; decreases
   C) does not change; increases
   D) decreases; decreases
   E) decreases; increase

23. Increased international trade reduces the demand for a country's products that are produced more efficiently abroad (import-competing products). This increase in trade _____ the demand for workers in import-competing industries, and _____ their wages.
   A) increases; increases
   B) increases; decreases
   C) does not change; increases
   D) decreases; decreases
   E) decreases; increase

Short-answer questions:

24. Production data for Bob's Bicycle factory are as follows:

<table>
<thead>
<tr>
<th>Number of workers</th>
<th>Bikes assembled per day</th>
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<tbody>
<tr>
<td>1</td>
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<tr>
<td>2</td>
<td>18</td>
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<td>3</td>
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Other than wages, Bob has costs of $100 (for parts and so on) for each bike assembled.

a. Bikes sell for $130 each. Find the marginal product and the value of the marginal product for each worker. (Don’t forget about Bob’s cost of parts) (5 points)

<table>
<thead>
<tr>
<th>Number of workers</th>
<th>Output (number of bikes)</th>
<th>Marginal product (number of bikes)</th>
<th>Value of marginal product (dollars)</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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b. Make a table showing Bob's demand curve for labor. (5 points)
25. Hold the other conditions constant, how would each of the following likely affect the real wage and employment of unskilled workers on an automobile plant assembly line? Explain. (3 points each)

a. Demand for the type of car made by the plant increases.

b. A sharp increase in the price of gas causes many commuters to switch to mass transit.

c. Because of alternative opportunities, people become less willing to do factory work.

26. How would each of the following factors be likely to affect the economywide supply of labor? (3 points each)

a. The mandatory retirement age is increased.
b. Increased productivity caused real wages to rise.

27. Given the following information for the fictitious country "Alpha," calculate:
(3 points each)

(a) the unemployment rate

(b) the labor force participation rate.

Working-age Population = 1 million
Labor force = 600,000
Number Employed = 570,000