



1. If an employer is thinking of hiring one additional worker, will he or she be more concerned with the average product of labor or with the marginal product of labor? Why? (5%)
2. A firm is employing 100 hours of labor and 50 tons of cement to produce 500 blocks. Labor costs \$4 per hour and cement costs \$12 per ton. For the quantities employed, $MP_L = 3$ and $MP_C = 2$. Show this situation in an isoquantisocost diagram. Explain, and show in the diagram, how the firm can produce the same output at a lower total cost. (10%)
3. "The difference between price and marginal cost is the amount of profit per unit of output, which the firm wishes to be as large as possible." Why is this statement false? What does the difference, if any, between price and marginal cost measure? (5%)
4. "In a constant-cost industry each firm has an upward-sloping marginal cost curve, yet all the firms together-the industry-have a horizontal supply curve." Explain why there is no contradiction in this statement. (5%)
5. Suppose the government grants an excise subsidy to the firms in a competitive market by, for example, giving them \$5 per unit of output. How will this subsidy affect price and output? Will the price to consumers fall by more if the industry is one of increasing costs or if it is one of constant costs? (10%)
6. Show how the most profitable output and price are determined for a monopoly that can produce its product at zero cost ($MC = AC = 0$). Explain the welfare cost that exists in this case. (10%)
7. "If the supply of labor increases and depresses wages in an industry, this outcome will benefit firms at the expense of workers." True or false? Explain. (5%)
8. If the demand for automobiles rises sharply, how will the price of refrigerators be affected? (Steel is an important input in the production of both products.) (5%)
9. "For a given investment demand curve, the more inelastic the saving supply curve, the more private investment will fall as a result of government borrowing." Use graphs to demonstrate this statement. (10%)
10. Suppose a technological innovation doubles the output of wine that can be produced by each combination of inputs. How will this innovation affect the production possibility frontier? Can consumers consume more wine and more corn after this innovation is introduced? (10%)

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11. According to Albert Einstein: "The economic anarchy of capitalist society as it exists today is in my view the main cause of our evils. Production is carried on for profit, not for use." Is there a conflict between "production for profit" and "production for use"? (5%)
12. "When public goods or externalities lead to inefficient resource allocation, government intervention is justified." Is it? Why? (5%)
13. Seat belts were available as options before they were required by law in automobiles. Most motorists, however, did not purchase them. Assuming that motorists were aware that seat belts reduced injuries from accidents, were motorists irrational in not purchasing them? (5%)
14. If a person's income rises by 10 percent and, simultaneously, the price of gasoline increases by 10 percent, can we predict how the consumption of gasoline will be affected? Can we predict how, on average, consumption of other goods will be affected? Use the concepts of income and substitution effects to answer this question. (10%)

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