

Note: This test contains 5-page Question Sheets. Please check them before you answer question by question.

I. Multiple Choice (2% for each, and 50% totally)

1. The term "opportunity cost" points out that
 - (a) there may be such a thing as a free lunch.
 - (b) not all individuals will make the most of life's opportunities because some will fail to achieve their goals.
 - (c) executives do not always recognize opportunities for profit as quickly as they should.
 - (d) any decision regarding the use of a resource involves a costly choice.
2. Which of the following is a normative economic statement?
 - (a) The government's cuts in welfare spending impose an unfair hardship on the poor.
 - (b) Next year's inflation rate will be under 4 percent.
 - (c) Consumers will buy more gasoline over the Christmas holiday even if the price of gas is 10 cents higher than it was during the Thanksgiving holiday.
 - (d) The current butter surplus is the result of federal policies.
3. The fallacy of composition is the (false) statement that
 - (a) the error of reasoning from timing to cause and effect.
 - (b) models can be positive without being normative.
 - (c) what is true of the part is true of the whole.
 - (d) experiments can be designed to analyze human behavior.
4. A PPF bows outward because
 - (a) consumers prefer about equal amounts of the different goods.
 - (b) entrepreneurial talent is more abundant than human capital.
 - (c) resources are used inefficiently.
 - (d) not all resources are equally productive in all activities.
5. The "big tradeoff" refers to the fact that the government makes decisions between
 - (a) equality and distribution.
 - (b) equality and production.
 - (c) equality and efficiency.
 - (d) consumption and efficiency.
6. Because of the existence of comparative advantage, the total output of goods is higher when each producer
 - (a) produces several different goods.
 - (b) produces at the midpoint of its PPF.
 - (c) makes both intermediate and final goods.
 - (d) specializes in the production of a particular good.
7. Economic growth is enhanced by all of the followings except

- (a) the existence of the market.
 - (b) investment in human capital.
 - (c) capital accumulation.
 - (d) technological change.
- 8.. If the marginal benefit of computers consumed is greater than the marginal cost of computers produced, this implies that
- (a) there is the optimal output of computers from social viewpoint.
 - (b) there is the optimal output of computers from producers' viewpoint.
 - (c) there should be more output of computers produced.
 - (d) there should be less output of computers produced.
9. A drop in the price of a compact disc shifts the demand curve for prerecorded tapes leftward. From that you know compact discs and prerecorded tapes are
- (a) complements.
 - (b) substitutes.
 - (c) inferior goods.
 - (d) normal goods.
10. The demand for a good increases when the price of a substitute _____ and also increases when the price of a complement _____.
- (a) rises; falls
 - (b) rises; rises
 - (c) falls; rises
 - (d) falls; falls
11. Which of the following does not shift the supply curve rightward?
- (a) A technological advance.
 - (b) A decrease in the wages of labor used in production of the good.
 - (c) A fall in the prices of a substitute in production.
 - (d) An increase in the price of the good.
12. Leather belts and leather shoes are substitutes in production. If style changes increase the demand for leather belts, the supply curve of leather shoes will shift
- (a) leftward and the equilibrium price of leather shoes will rise.
 - (b) leftward and the equilibrium price of leather shoes will fall.
 - (c) rightward and the equilibrium price of leather shoes will fall.
 - (d) rightward and the equilibrium price of leather shoes will rise.
13. Suppose the market demand function of good Z is $Q_d = 120 - 3P$. When $P = \$10$ declines to $P = \$8$, the price elasticity of demand is
- (a) 0.333
 - (b) 0.287
 - (c) 0.25
 - (d) None of above

14. Suppose a certain good has its normal market demand and market supply curves, and the government levies a sales tax on producers. Such a sales tax will _____ the price elasticity of demand for that good.
- (a) reduce
 - (b) raise
 - (c) first raise and then reduce
 - (d) not affect
15. If the cross elasticity of demand between goods A and B is positive,
- (a) A and B are substitutes.
 - (b) A and B are complements.
 - (c) the demands for A and B are both price elastic.
 - (d) the demands for A and B are both price inelastic.
16. Suppose the market demand and market supply functions of good Y are as follows:
 $Q_d = 40 - 2P$ and $Q_s = -10 + 3P$, then the total social surplus is
- (a) 500/3
 - (b) 200/3
 - (c) 200
 - (d) 100/3
17. Following Question 16 above, if a price ceiling is set at \$8, then it will cause _____ of social deadweight loss.
- (a) \$18
 - (b) \$17
 - (c) \$15
 - (d) \$13
18. Which of the following situations is not the obstacle to efficiency?
- (a) equality on income distribution
 - (b) import quota
 - (c) subsidies on production
 - (d) public goods
19. Suppose the government imposes a \$1 tax on frisbees. The price of a frisbee does not change
- (a) with a perfectly elastic supply for frisbees.
 - (b) with a perfectly elastic demand for frisbees.
 - (c) with a downward-sloping supply curve for frisbees.
 - (d) with a downward-sloping demand curve for frisbees.
20. If sanctions are imposed on buyers but not on sellers of an illegal good, then the equilibrium price _____ and the equilibrium quantity _____.
- (a) rises; increases
 - (b) rises; decreases

- (c) falls; increases
(d) falls; decreases
21. If there are no speculative markets in inventories, which of the following combination would yield the smallest price fluctuation?
(a) Small supply shifts and inelastic demand
(b) Small supply shifts and elastic demand
(c) Small supply shifts and perfectly elastic demand
(d) Large supply shifts and inelastic demand
22. A backward labor supply curve results from the fact that
(a) there is a positive substitution effect on the labor supplied.
(b) there are a negative substitution effect and a positive income effect.
(c) there are a large negative substitution effect and a small positive income effect.
(d) a positive income effect is large enough to dominate a negative substitution effect.
23. The law of diminishing returns implies that, with the use of capital fixed, as the use of labor rises,
(a) total product will fall eventually.
(b) the marginal product of labor will fall eventually.
(c) the total product of labor will fall below the marginal product of labor.
(d) the production process will become technologically inefficient eventually.
24. If a monopolist can perfectly price discriminate, then
(a) it will charge just two different prices in two different markets.
(b) it will not give a discount to those who buy in bulk.
(c) the deadweight loss is larger than if it cannot price discriminate.
(d) there will be no consumer surplus.
25. Relative to perfect competition, a single-price monopolist that maximizes its profits would offer a greater quantity at a lower price if
(a) it can exploit economies of scale or scope.
(b) it earns zero profit.
(c) there are no barriers to entry.
(d) it sets marginal revenue equal to marginal cost.

II. Suppose an individual utility function has the form of $U = X^{0.4}Y^{0.6}$, where X and Y are the commodity consumed and M is this individual income. P_X, P_Y denote the market prices of these two commodities. Please derive the Marshallian and Hicksian demand function for X and Y. (15 %)

III. Suppose that there are n firms to produce an identical product and the inverse demand function for that product is $P = f(Q)$, where Q is the total quantity demanded and P is the price of that product. The demand elasticity is assumed as ε_d , and q_i is quantity produced of the i^{th} firm. Therefore, $Q = \sum_{i=1}^n q_i$ and S_i represents the marketing share of the i^{th} firm. $TC_i(q_i)$ and $MC_i(q_i)$ are the i^{th} total cost and marginal cost functions, respectively.

1. Please derive the first order condition for i^{th} firm under profit maximization using the term of ε_d and S_i . (5 %)
2. Please derive the first order condition for i^{th} firm when the numbers of firm goes to infinity. (5 %)
3. Please derive the first order condition when there is only one firm in this industry. (5 %)

IV. The behavioral functions in the commodity market are given by

$C = 50 + 0.5(Y - T)$, $I = 35 - 20r$, $X = 100$, and $M = 10 + 0.3Y$, where Y is real GDP, C consumption, I investment, r the interest rate, G government spending, T government tax, X exports and M imports. Assume that $G = T = 50$. The equilibrium condition is $Y = C + I + G + (X - M)$.

In the monetary market, the demand function is given by $\frac{M^D}{P} = 50 + 0.5Y - 50r$ while the nominal money supply is 100.

1. Please derive the IS - LM and aggregate demand (AD) functions, respectively. (9 %)
2. Suppose the price level is 2 (i.e. $P=2$). Please find the equilibrium GDP (Y), interest rate (r) and consumption (C), respectively. (6 %)
3. If the government spending is increased to 70, please find the equilibrium GDP (Y). (5 %)