

ECON 301E: Quiz 1
Monday, 15 Jan., 1996.

1. Production techniques are chosen in large part based on their:
 - A. Relative efficiency.
 - B. Relative cost.
 - C. Absolute efficiency.
 - D. Attractiveness.
2. When a consumer's own actions cannot attain a more preferred situation, she faces a (n):
 - A. Coercive arrangement.
 - B. Unconstitutional rule.
 - C. Unfair system.
 - D. Equilibrium.
3. When a resource like water, fish in the ocean, or grazing land is available to everyone, it is a:
 - A. Common property.
 - B. Personal property.
 - C. Private property.
 - D. Impersonal property.
4. A perfectly competitive market has all of the following characteristics except:
 - A. Each buyer offers to buy a small part of the total quantity transacted.
 - B. Each seller offers to sell a small part of the total quantity transacted.
 - C. There are many buyers.
 - D. There are few sellers.
5. A perfectly competitive market has all of the following characteristics except:
 - A. Each buyer offers to buy a small part of the total quantity transacted.
 - B. Each seller offers to sell a small part of the total quantity transacted.
 - C. There are few buyers.
 - D. There are few buyers.
6. A perfectly competitive market has all of the following characteristics except:
 - A. Each buyer offers to buy a small part of the total quantity transacted.
 - B. Each seller offers to sell a large part of the total quantity transacted.
 - C. There are many buyers.
 - D. There are many sellers.
7. In a perfectly competitive market, each buyer can choose:
 - A. Quantity only.
 - B. Price only.
 - C. Both quantity and price.
 - D. Neither quantity nor price.
8. In economics, a resource endowment is:
 - A. The resources available to an economy.
 - B. The things people are entitled to.
 - C. The things people have inherited.
 - D. A reward for efficient production.
9. An economy's technology is:
 - A. A machine used to produce a particular product.
 - B. A process for discovering new goods and services.
 - C. Its ways of using resources to produce goods.
 - D. The unchanging part of a manufacturing processes.
10. In economics, self interest is a:
 - A. Measure of greed.
 - B. Normative assumption.
 - C. Positive assumption.
 - D. Measure of value.
11. In economics, institutions:

- A. Conduct research in medicine and engineering.
 - B. Control and direct private behavior.
 - C. Provide grants to artists and writers.
 - D. Slow the rate of change in society.
12. Comparative static analysis evaluates the effect of:
- A. Endogenous variables on each other.
 - B. Endogenous variables on exogenous variables.
 - C. Exogenous variables on each other.
 - D. Exogenous variables on endogenous variables.
13. The Pareto criterion selects a social state by finding:
- A. Whether at least one person is better off than in other states.
 - B. The welfare budget required to support indigent people in each social state.
 - C. The profit stores would earn in each social state.
 - D. The number of people who would vote for each social state.
14. The Cost-Benefit analysis selects a social state by finding whether:
- A. The gains to winners are greater than the losses to losers.
 - B. The number of gainers is larger than the number of losers.
 - C. Gainers and losers are indifferent between alternatives.
 - D. Society can pay compensation to losers.

ECON 301E: QUIZ 2.
Monday, 22 Jan., 1996.

1. In economics, consumption bundles are: A). Bags used by retail merchants. B). Combinations of goods and services. C). Preference orderings. D). Utility functions. *Page 41.*
2. List the five assumptions about individual's preferences. *Pages 41 - 42.*
3. Which of the following preference orderings violates the transitivity assumption?
 - a). Apples are preferred to Oranges, Oranges are preferred to Bananas, Apples are preferred to Bananas.
 - b). Bananas are preferred to Apples, Apples are indifferent to Oranges, Bananas are preferred to Oranges.
 - c). Bananas are indifferent to Oranges, Bananas are preferred to Apples, Apples are preferred to Bananas.
 - d). Oranges are indifferent to Bananas, Bananas are indifferent to Apples, Apples are indifferent to Oranges. *Page 42.*
4. An indifference curve represents: a) equivalent consumption bundles. b) complete apathy. c) average preferences. d) A complete preference ordering.
5. Consider the following preference statements: (7,9) is preferred to (5,8); (18,0) is preferred to (7,9); and (5,8) is preferred to (6,5). If the individual's preferences are consistent, then the preferences ordering over these four consumption bundles is:
 - A) (18,0), (5,8), (7,9), (6,5).
 - B) (7,9), (5,8), (18,0), (6,5).
 - C) (18,0), (7,9), (5,8), (6,5).
 - D) (5,8), (6,5), (18,0), (7,9).
6. If the indifference curve is smooth, the marginal rate of substitution is not:
 - a) A function b) Constant c) Minus one times the slope of the indifference curve. d) The rate at which an individual is willing to trade goods. *Page 52*
7. What kind of preferences are represented by the following utility functions?
 - (a). $U(x_1, x_2) = x_1 + \sqrt{x_2}$, (b). $U(x_1, x_2) = \sqrt{x_1 + x_2}$, (c). $U(x_1, x_2) = 13x_1 + 13x_2$, (d) $U(x_1, x_2) = x_2^2$, (e). $U(x_1, x_2) = c \ln x_1 + d \ln x_2$, (f). $U(x_1, x_2) = \text{Min}(ax_1, bx_2)$ (g). $U(x_1, x_2) = x_1^2 + 2x_1x_2 + x_2^2$
 - (h). $U(x_1, x_2) = x_1^2 + 2x_1\sqrt{x_2} + x_2$.
8. Find the MRS consistent with each of the utility functions in question 7 above.

ECON 301E: QUIZ 5.
Due in Tutorial next Week.

1. Given the following utility function for a single individual

$$U_i = \left(y - \frac{e_i^2}{4} \right),$$

- (a). Derive the utility maximizing level of effort e^* , utility maximizing level of income y^* , and maximized utility for a one-person firm.
- (b). Assuming that productivity index, $B = 4$, derive the utility maximizing level of effort e^* , utility maximizing level of income y^* , and maximized utility for a two-person partnership.
- (c). Repeat part (b) for an owner-managed team production.

2. Examine the role of transactions costs in influencing the growth of a firm.

3. Clearly distinguish between *generic* and *specific* inputs.

4. Given the following production function:

$$Q = f(x_1, x_2^0)$$

- (i). Write expressions for $AP(x_1)$ and $MP(x_1)$.
- (ii). Show that $AP(x_1) = MP(x_1)$ when $AP(x_1)$ is maximum.
- (iii). Show that *the law of diminishing marginal productivity* holds.
- (iv). Show that the output elasticity of x_1 can be expressed as the ratio of marginal and average productivities. (*Hint*: the output elasticity of x_i is defined as the proportionate rate of change of Q with respect to x_i).

5. For the production function given below, Q = output, x_1 and x_2 are inputs.

$$Q = Ax_1^\alpha x_2^\beta$$

Find the following: (i). MP (ii). AP (iii). output elasticities of x_1 and x_2 . (iv). Show that *the law of diminishing marginal productivity* holds.

Review Questions

Qn. 1. Which of the following exhibits risk averse, risk neutral or risk loving:

$U(W) = \ln W$. ; (ii). $U(W) = W^2$; $U(W) = W^{1/2}$

2. The utility function of Jay is $U = 300W - 2W^2$. What is Jay's attitude to risk? Explain the relationship between utility and wealth for Jay.

3. A risk averse person is offered a choice between a gamble that pays \$1000 with a probability of 0.25 and \$100 with a probability of 0.75, or a payment of \$325. Which one would he choose?

4. On an appropriate diagram, show (i). the reservation price a risk averse individual would pay for an insurance scheme that offers full coverage. (ii). the *consumer surplus* that arises from certainty (for a risk averse individual). What is the condition under which an insurance market can exist? Explain.

5. What is the maximum premium a *risk neutral* individual would pay for insurance? Illustrate your answer with an appropriate diagram. What is the implication of this for insurance markets?

6. What is the maximum premium a *risk loving* individual would pay for insurance? Illustrate your answer with an appropriate diagram. What is the implication of this for insurance markets?

7. Given the following utility function for a single individual

$$U_i = \left(y - \frac{e_i^2}{4} \right),$$

(a). Derive the utility maximizing level of effort e^* , utility maximizing level of income y^* , and maximized utility for a one-person firm.

(b). Assuming that productivity index, $B = 4$, derive the utility maximizing level of effort e^* , utility maximizing level of income y^* , and maximized utility for a two-person partnership.

(c). Repeat part (b) for an owner-managed team production.

8. Examine the role of transactions costs in influencing the growth of a firm.

9. Clearly distinguish between *generic* and *specific* inputs.

10. Examine the sources of productivity gains from specialization.