



MEFI admission test

Surname _____ Name _____

Microeconomics

1. Indifference curve that intersect would be illogical constructs because

- A. More is better than less
- B. Of diminishing marginal utility
- C. Of the transitivity property of indifference theory
- D. Of both A and C above

2. The marginal rate of substitution between food and shelter for a given point on an indifference curve

- A. Is equal to the absolute value of the slope of the indifference curve at that point
- B. Is equal to the rate at which the consumer is willing to exchange the two goods in the marketplace
- C. Reflects the relative value the consumer attaches to the two goods
- D. Is described, in part, by each of the above statements

3. Let us assume that a firm minimizes production cost for a given level of output. The Marginal Product of Labor is 5, the Marginal Product of Capital is 15 and the cost of Capital is 300. Then the price of Labor will be:

- A. 900
- B. 400
- C. 100
- D. without more information, one cannot infer the price of Labor

4. The substitution effect of a price decrease for a good with a normal indifference curve pattern

- A. Is always inversely related to the price change
- B. Measures the change in consumption of the good that is due to the consumer's feeling of being richer
- C. Is measured by the horizontal distance between the original and the new indifference curve
- D. Is sufficient information to plot an ordinary demand curve for the commodity being considered

5. Producer surplus is

- A. The amount of revenue received by the producer above the amount that would have been required for her to supply the product in the short run
- B. The amount of economic profit that would be present if there were no fixed costs in the production process

- C. The difference between the total revenue and the total variable cost of a production process
- D. All the above

6. A monopolist with the demand curve $P = 100 - Q$ is supposed to follow a policy of perfect price discrimination. In case the constant marginal cost is 40, what will be the amount of sales

- A. 40
- B. 30
- C. 60
- D. With the above information we cannot get the amount of sales

7. We can be sure that a person is risk averse if

- A. He accepts a fair gamble only
- B. He accepts a gamble that has zero expected value
- C. He accepts a gamble that has negative expected value
- D. His utility from sure income is greater than the utility derived from gambling income with the same expected value as the sure income.

8. A monopolist will maximize profit

- A. Where total revenue is maximized
- B. Where the slope of the total revenue function equals the slope of the total cost function
- C. Where average cost is at a minimum
- D. Where all the above are true

9. A Pareto preferred transaction is one where

- A. The loser in a transaction loses less than the gainer gains
- B. All must gain welfare compared with the pre-transaction position
- C. No one loses and at least one person gains in the transaction
- D. The consumers must have moved to the contract curve

10. Which Oligopoly Model would be most desirable from the point of view of the consumer

- A. Cournot
- B. Bertrand
- C. Stackelberg
- D. Monopoly Collusion

Macroeconomics

1. According to orthodox neoclassical theory the natural rate of unemployment is due to

- A. market frictions and imperfections
- B. scarce mobility of the labour force
- C. high reservation wages and job search activity
- D. all factors above

2. According to Keynesian theory, in the short run if Government expenditure rises

- A. output rises by the same amount
- B. output rises more because of the multiplier
- C. output rises less because taxes rise
- D. output remains unchanged because there is a full crowding out effect

3. In the short run the most volatile component of aggregate demand is

- A. private consumption
- B. public expenditure
- C. private investment
- D. foreign demand

4. The liquidity trap identifies a situation where

- A. the money supply is inelastic
- B. the money demand is inelastic
- C. the money demand is infinitely elastic
- D. the rate of interest is at zero

5. In the IS-LM model if private investment increases in the short run

- A. the rate of interest increases and output falls
- B. the rate of interest increases but output increases
- C. the rate of interest increases but output remains unchanged
- D. nothing changes because of full employment

6. In the IS-LM model an increase in the demand for money causes

- A. a downward shift of the LM curve
- B. an upward shift of the LM curve
- C. an upward shift of both the LM and the IS curve
- D. no shift in no curve because the supply of money automatically adapts

7. According to the Mundell-Fleming (IS-LM-BP) model, under free capital mobility and fixed exchange rates

- A. monetary policy is ineffective
- B. monetary policy is very effective
- C. both monetary and fiscal policy are ineffective
- D. none of the above is true

8. In the AS-AD model a favourable demand shock causes

- A. a fall in output and an increase in prices
- B. an increase in output and a fall in prices
- C. a fall in output and in prices
- D. an increase in output and in prices

9. In the AS-AD model a negative supply shock causes

- A. a fall in output and an increase in prices
- B. an increase in output and a fall in prices
- C. a fall in output and in prices
- D. an increase in output and in prices

10. In the labour market under conditions of oligopoly with constant returns (i.e. imperfect competition and WS-PS schedules) if firms' market power (i.e. the mark-up) decreases, then ceteris paribus

- A. equilibrium unemployment will fall and wages rise
- B. equilibrium unemployment will fall but wages will also fall
- C. equilibrium unemployment will remain unchanged
- D. equilibrium unemployment will rise because wages rise

Mathematics-Statistics

1) Let x and y be real numbers with $x + y < 0$ and $xy > 0$. Find the true statement

- A: $x < -y \wedge y > 0$
- B: $y > -x \wedge x < 0$
- C: $x > -y \wedge y < 0$
- D: $x < 0 \wedge y < 0$

2) Identify the parabola that intersects the y -axis at the point of ordinate equal to -3

- A: $y = x^2 - 9$
- B: $y = x^2 - 3x$
- C: $y = x^2 - 4x - 3$
- D: $y = -x^2 + 4x + 3$

3) Find the true statement

- A: $\log_3 2 < 0$
- B: $0 < \log_3 2 < 1$
- C: $1 < \log_3 2 < 2$
- D: $\log_3 2 > 2$

4) The solution of the inequality $|x - 1| > 1$ is

- A: $(-\infty, 0) \cup (2, +\infty)$
- B: $(0, 2)$
- C: $(-\infty, 0) \cup (1, +\infty)$
- D: $(1, +\infty)$

5) Which inequality has the interval $[0, 1)$ as a solution

- A: $(x - 1)x \geq 0$
- B: $\frac{1 - x}{x} \geq 0$
- C: $x(1 - x) \geq 0$
- D: $\frac{x}{1 - x} \geq 0$

6) Which of the following statements involve descriptive statistics as opposed to inferential statistics?

- A) The Alcohol, Tobacco and Firearms Department reported that Houston had 1,791 registered gun dealers in 1997.
- B) Based on a survey of 400 magazine readers, the magazine reports that 45% of its readers prefer double column articles.
- C) The FAA samples 500 traffic controllers in order to estimate the percent retiring due to job stress related illness.
- D) Based on a sample of 300 professional tennis players, a tennis magazine reported that 25% of the parents of all professional tennis players did not play tennis.

7) A variable is classified as ordinal if:

- A) there is a natural ordering of categories
- B) there is no natural ordering of categories
- C) the data arise from continuous measurements
- D) we track the variable through a period of time

8) Which of the following statements is true for any two events A and B defined on a sample space S ?

- A) If the intersection of events A and B is the empty set, then A and B are collectively exhaustive.
- B) If the union of events A and B is the empty set, then each of A and B is the empty set.
- C) If events A and B are collectively exhaustive, then $A \cup B \neq \phi$.
- D) If events A and B are mutually exclusive and collectively exhaustive, then the union of A and B is not necessarily the sample space.

9) What is the probability that you have to wait more than 30 seconds for the light?

- A) 0.25
- B) 0.50
- C) 0.75
- D) 1.00

10) In a hypothesis testing problem the symbol $(1 - \alpha)$ indicates

- A) The power of a test.
- B) The probability of a Type I error.
- C) The probability of a Type II error.
- D) The probability of not rejecting the null hypothesis when the hypothesis is true.