

Test 1A

Economics 101-Principles of Microeconomics
Professor Wallace, Spring 2015

Part I-Multiple Choice (45 points): On the answer sheet mark the letter corresponding to the best response for each question.

Arthur Dent must allocate his time (24 hours) each day between work and leisure. Arthur can work as much or as little as he wants. He earns 20 KD per hour of work. Use this information for the next 3 questions.

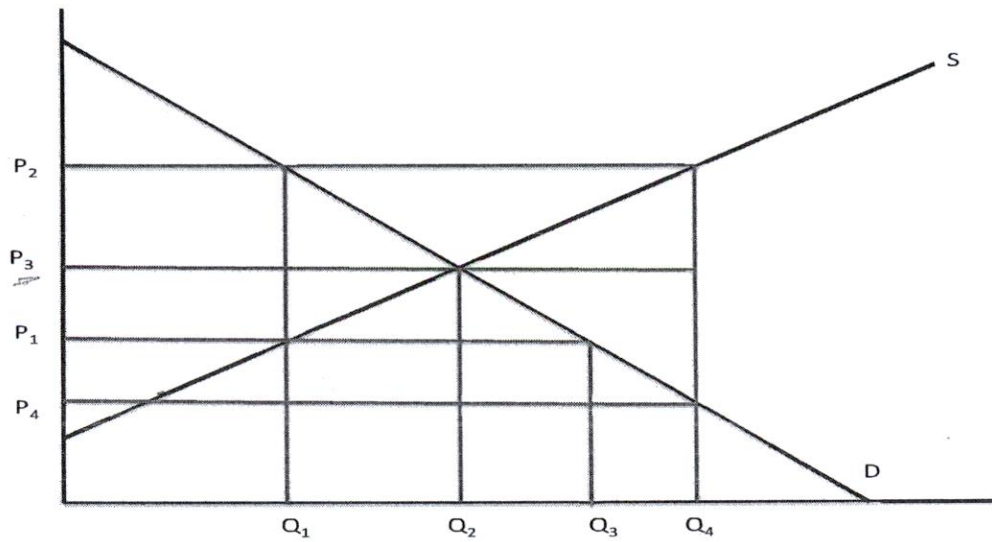
1. The opportunity cost of an hour of leisure is _____.
 - a. 10 KD
 - b. 15 KD
 - c. 20 KD
 - d. impossible to calculate
 - e. none of the other answers

Handwritten notes: $20 \times 1 = 20$, $24 - 24 = 0$
2. A 25% tax is imposed on the income of everyone. After imposition of the tax, what is Arthur's opportunity cost of one hour of leisure? _____.
 - a. 10 KD
 - b. 15 KD
 - c. 20 KD
 - d. impossible to calculate
 - e. none of the other answers

Handwritten notes: $0.25 \times 20 = 5$, $20 - 5 = 15$
3. The opportunity cost of 1 KD of income is _____.
 - a. 1 KD
 - b. $\frac{1}{20}$ hour
 - c. 20 hours
 - d. impossible to calculate
 - e. none of the other answers

Handwritten note: $1/20$
4. We observe a decrease in the equilibrium price of gasoline and an increase in the equilibrium quantity. Which of the following could produce this change?
 - a. an increase in the price of a substitute in consumption.
 - b. a decrease in the cost of petroleum, the most important input in gasoline production.
 - c. a decrease in income, gasoline is a normal good.
 - d. an increase in the number of buyers.
 - e. none of the above
5. We observe an increase in the equilibrium price of tomatoes and a decrease in the equilibrium quantity. Which of the following could produce this change?
 - a. an increase in the price of a substitute in consumption.
 - b. a decrease in the cost of inputs in tomato production.
 - c. a decrease in income, tomatoes are a normal good.
 - d. an increase in the number of tomato producers.
 - e. none of the above
6. Suppose the demand for books goes decreases when the price of video games goes down. We can conclude that these two goods are
 - a. complements
 - b. substitutes
 - c. unrelated
 - d. luxuries
 - e. none of the above
7. During an economic downturn when consumer income falls, the demand for pizza increases and the demand for sushi decreases. This implies that
 - a. pizza and sushi are complements.
 - b. pizza and sushi are substitutes.
 - c. pizza is a normal good and sushi is an inferior good.
 - d. pizza is an inferior good and sushi is a normal good.
 - e. none of the above are correct.

The graph shows the market for apartments in Kuwait. Use the graph for the next 4 questions.



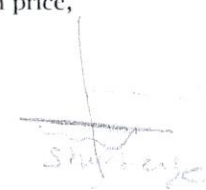
8. If the market for apartments is in equilibrium then the price is
 a. P_1 b. P_2 **c. P_3** d. P_4 e. none of the others
9. If the market for apartments is in equilibrium then the quantity exchanged is
 a. Q_1 **b. Q_2** c. Q_3 d. Q_4 e. none of the others
10. Of the three prices shown below, which would be an effective price ceiling?
a. P_1 b. P_2 c. P_3 d. all three prices e. none of the others
11. Which of the following events could produce an equilibrium at P_4, Q_4 ?
 a. an increase in the number of buyers of apartments.
 b. a rise in the price of houses, a substitute for apartments.
c. a decrease in the costs of constructing apartments.
 d. an earthquake destroys some apartment buildings.
 e. none of the above
12. A production possibilities frontier shows
 a. different quantities of capital and labor that can be used to produce total output.
b. the combinations of two goods that can be produced in the economy at a point in time.
 c. decreasing opportunity costs.
 d. all of the above.
 e. none of the above.
13. A society can produce two goods: donuts and milk. The society's production possibility frontier (PPF) is negatively sloped and "bowed outward" from the origin. As this society moves down its production possibility frontier, producing more and more units of donuts, the opportunity cost of producing milk
a. decreases.
 b. remains constant.
 c. increases.
 d. could decrease or increase depending on the technology.
 e. none of the above.

14. A society can produce two goods: donuts and milk. The society's production possibility frontier (PPF) is negatively sloped and "bowed outward" from the origin. A point inside the PPF shows

- a. too many donuts and too much milk are being produced.
- b. an unattainable combination of donuts and milk.
- c. unemployment or underemployment of resources.
- d. all of the above.
- e. none of the above.

15. If the government imposes a price ceiling that is below the equilibrium price,

- a. the price ceiling will have no economic impact.
- b. there will be a surplus in the market.
- c. there will be a shortage in the market.
- d. the quantity supplied will equal the quantity demanded.
- e. none of the above.



Part II-True False (30 points): Mark T if a statement is true and F if a statement.

- 16 T F 1. Sunk costs can be recovered.
- 17 T F 2. All models have unrealistic assumptions.
- 18 T F 3. A change in quantity supplied occurs when the demand schedule shifts.
- 19 T F 4. If your best alternative to being a student at GUST is working for 1000 KD per month then your opportunity cost of spending a 5 month semester studying is 5000 KD.
- 20 T F 5. An economy operates outside its production possibilities frontier when opportunity costs are low.
- 21 T F 6. Governments do not have budget constraints thus are not affected by opportunity costs.
- 22 T F 7. I can clean my apartment faster than anyone else, therefore it is better for me to clean my apartment rather than hire someone.
- 23 T F 8. When the government sets a price ceiling on a good, it establishes the minimum price at which the good can be sold.
- 24 T F 9. A firm realizes that the value of the (diminishing) marginal product of labor exceeds the wage rate. The firm should employ fewer workers.
- 25 T F 10. To be effective a price floor must exceed the equilibrium price.

Part III-Problems (45 points)

1. (20 points) The table shows a list of events. Each event affects the market indicated. In each case you should show the effects of the event on demand (D), supply (S), the equilibrium price (P), and the equilibrium quantity (Q). The events are independent in the sense that an event listed in one row of the table does not affect the market in a different row.

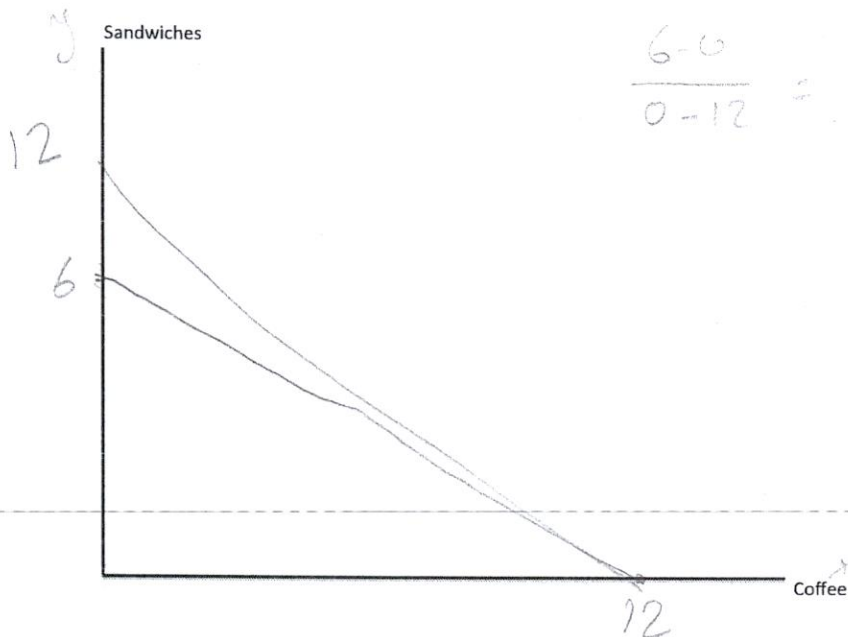
Use the following notation:

+ increase or shift right - decrease or shift left U uncertain effect or shift 0 no effect or shift

Market	Event	D	S	P	Q
Video Games	Technological advances in the production of video games				
Health care	Increase in income. Health care is a normal good.				
Chocolate	Cost of cacao (the main input) increases and a study shows that eating chocolate increases intelligence				
Apartments in Los Angeles	A strong earthquake destroys many buildings in Los Angeles. There are no fatalities.				
Desktop computers	Wages rise in computer factories and the price of tablets, a substitute, declines.				

2. (25 points) Bart must allocate his 12-KD in spending each day at GUST between coffee and sandwiches. The price of a coffee is 1 KD per cup and the price of a sandwich is 2 KD.

- Draw Bart's budget constraint in the graph below. Mark the points where the constraint touches the axes.
- What is the opportunity cost of one sandwich? 2 cup(s) of coffee.
- What is the opportunity cost of one cup of coffee? $\frac{1}{2}$ sandwich(es).
- Due to droughts in coffee-growing regions of the world the price of coffee rises to 2 KD per cup. What is the new opportunity cost of one sandwich? 1 cup(s).
Of one cup of coffee? $\frac{1}{2}$ sandwich(es).
- In the graph, show the effects of the increase in the price of coffee on Bart's budget constraint. Mark the points where the constraint touches the axes.



$$\frac{6-0}{0-12} =$$

Coffee	Sandwiches
12	0
0	6
6	6

$$1 \downarrow \text{Coffee} + 2 \downarrow \text{s} = 12 \text{ KD}$$

$$2 \downarrow \text{Coffee} + 2 \downarrow \text{s} = 12 \text{ KD}$$

Answer Key-Exam 1
Principles of Microeconomics-Professor Wallace

Version A

1. c 2. b 3. b 4. b 5. e 6. b 7. d 8. c 9. b 10. a
11. c 12. b 13. a 14. c 15. c 16. F 17. T 18. T 19. T 20. F
21. F 22. F 23. F 24. F 25. T

Market	Event	D	S	P	Q
Video Games	Technological advances in the production of video games	0	+	-	+
Health care	Increase in income. Health care is a normal good.	+	0	+	+
Chocolate	Cost of cacao (the main input) increases and a study shows that eating chocolate increases intelligence	+	-	+	U
Apartments in Los Angeles	A strong earthquake destroys many buildings in Los Angeles. There are no fatalities.	0	-	+	-
Desktop computers	Wages rise in computer factories and the price of tablets, a substitute, declines.	-	-	U	-

2. a. 2 cups b. ½ sandwich c. 1 cup d. 1 sandwich
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