St. Mary's University

College of Open and Distance Learning

Microeconomics I

Assignment

(2012-I)

Name: _

I.D.N0: _

Department: _ Marketing management

Term: _1

Center: St. Mary's University

Program: Degr

- **This is the only assignment of this course.**
- **This assignment is to be completed and submitted to the office of your center. Do not attempt the assignment until you are certain that you have understood the units it covers and have revised your self-test exercises and learning activities, and other necessary references.**
- **If you have any question about the units and activities, state the item/s clearly on a separate sheet of paper and attach to your assignment paper.**
- **Due Date: This assignment must be submitted to the office of your center ON OR before THE TUTORIAL PROGRAM. Please strictly follow the deadline indicated.**

Part I: True or False

Write "True" if the statement is correct and "False" if it is incorrect in the space provided. (1 pt. each)

True 1. PPF shows the maximum possible combination of goods and services that the economy is able to produce at a given technology and fixed resources.

False 2. Scarcity is the problem of only least developed countries.

False 3. The real opportunity cost of an action is measured in terms of money cost.

True 4. A model is a formal framework for representing the basic feature of a complex system by a few central relationships.

False5. A change in supply is a movement from one point to another on the supply curve.

Part II. Multiple Choices

Choose the correct answer among the alternatives given to each questions, and write the letter corresponding to your choice in the space provided. (1 pt each)

D 1. Which of the following is **not** a **determinant (shifters)** of demand?

A. Number of buyers
C. Price of related goods
B. Taste and preference
,D. Change in input price

C 2. When both demand and supply decrease,

A. equilibrium price decreases and equilibrium quantity demand increases
B. both equilibrium price and equilibrium quantity demand increase
C. equilibrium price becomes indeterminate and equilibrium quantity decreases
D. equilibrium price decreases and equilibrium quantity becomes in determinant

A 3. At equilibrium:

A. the quantity demanded equals the quantity supplied
B. the quantity demanded is greater than the quantity supplied
C. the quantity demanded is less than the quantity supplied
D. All of the above

D 4. The law of supply states that other things being equal.

A. Price and quantity supplied are directly related
B. Price and quantity supplied are inversely related
C. Price and income are positively related
D. A and C

D 5. One of the following is **not** the characteristics of indifference curve.

A. Negatively- sloped
B. Convex to the origin
C. Higher indifference curve represents higher utility
D. Two indifference curve can intersect each other

A 6. If demand is elastic , then as the price increases total revenue _____.

A. increases
B. decreases
C. remain constant
D. zero

D 7. Which one of the following is true?

A. The slop of an indifference curve is MRS
B. Production function is the relationship between inputs and outputs

C. Total product is the total quantity of an output produced by a firm for a given quantity of inputs

D. All of the above

B 8. If a 20% increase in all inputs yields exactly a 20 % increase in output, the production function exhibits_____.

A. an increasing return to scale
B. a constant return to scale
C. a decreasing return to scale
D. zero return to scale

D 9. One of the following is **not** a source of economies of scale

A. Indivisibilities in inputs
B. Specialization in inputs
C. Division of labor
D. Lack of employee motivation

A 10. The extra or additional cost of producing one more unit of output.

A. MC
B. TC
C. AC
D. TFC

Part III. Short Answer

Give short answer to each of the following questions in the space provided. (12 pts total)

1. What are the main kinds of firms? (3 pts)
   - ★ There are three main kind of firms in modern market economics these are:
     1. **Sole proprietorship** (single owner with unlimited liability)
     2. **Partnership** (two or more owner with unlimited liability)
     3. **Corporation** (owned by limited liability stockholders)
2. What is MRTS? (2pts)
   - ★ **MRTS** stand for **marginal rate of technical substitution** also called **marginal rate of substitution in production**

- ★ **MRTS** is the rate at which one input can be exchanged for another without changing the original output(or simply output)
- ★ **MRTS** measure the reduction in one input per unit increase in other input that is just sufficient to maintain a constant level of production
- ★ We can also say that **MRTS** is the ratio of marginal product of labor to the marginal product of capital

3. What does income elasticity of demand measures? (2pts)
   - Income elasticity of demand measures **the percentage change in quantity demanded** with respect to ***the percentage change in consumer's income***. It is calculated using the formula:
   - $E_{xy} = \frac{\text{Percentage change in quantity demanded of good } x}{\text{Percentage Change in income}}$
   - It give as whether the goods are necessity, luxury, or inferior goods by comparing their E_{xy} value
   - E_{xy} has a value between 0 and 1 (necessity goods) or greater than 1(luxury goods),or less than 0(inferior goods)

4. State the law of diminishing marginal utility (2pts)
   - ★ **The law of diminishing marginal utility** states that as the quantity of goods consumed increase the marginal utility derived from that good decrease
   - ★ It indicate that the gains in satisfaction will decline as successive unit of a given products are consumed
   - ★ It means consuming successive unit of particular product yield less and less extra satisfaction

5. Mention the determinants of price elasticity of demand (3pts)

The price elasticity of demand include

- ★ Substitutability
- ★ Proportion of income
- ★ Luxuries versus necessities
- ★ Time

Part IV: Work Out

Show the necessary steps clearly (3pts total)

Assume that two goods x and y. when the price of y changes from 2 birr 7 birr the quantity demanded of x changes from 10 to 20. based on the above information.

a. Calculate the cross elasticity of demand for x (1.5pts.)

Given	**required**
Initial price of good Y (Py_0)= 2 Final price of good Y(Py_f)=7 Initial quantity demanded of good X(Qx_0)=10 Final quantity demanded of good X(Qx_f)=20	cross elasticity of demand for X (Exy)=?

Solution

$$E_{xy} = \frac{\text{Percentage change in quantity demanded of good x}}{\text{Percentage Change in price of good y}}$$

$$= \frac{(Qx_f - Qx_0)Py_0}{(Py_f - Py_0)Qx_0}$$

$$= \frac{(20-10)\times 2}{(7-2)\times 10} = \frac{20}{50} = 0.4$$

Where

- Qx_f = final quantity demanded of good X due to increase in price of good Y
- Qx_0=initial quantity demanded of good X due
- Py_f=final price of good Y
- $Py_{0=}$ initial price of good Y
- $E_{xy=}$ cross elasticity of good X and Y

b. What type of goods are x and y ? (1.5pts)

★ Since E_{xy} is **positive** X and Y are **substitutes**