MURANG'A UNIVERSITY COLLEGE (MRUC)
A Constituent College of Jomo Kenyatta University of Agriculture and Technology (JKUAT)

UNIT NAME: INTRODUCTION TO MICROECONOMICS (HR/BCOM)

UNIT CODE: HBC 2104

DATE: 24th April 2013   TIME ALLOWED: 2 HOURS

INSTRUCTIONS:-
Answer questions **ONE** (compulsory) and any other **TWO** questions.

Question One (compulsory)

a) Write short notes on the following:-

     i. Consumer sovereignty

     ii. Scarcity and choice

     iii. Opportunity cost

     iv. Production possibility frontier   [8 marks]

b) More economies are currently opting for free market systems as opposed to controlled systems. Compare the two systems describing their respective advantages and disadvantages.   [6 marks]

c) The following economic functions have been derived by the accountant of Murang'a University College.

        $Q_a = 3P^2 - 4P$

        $Q_b = 24 - P^2$

   Where P is Price and Q is quantity.

i. Which of the two functions could represent a demand curve? A supply curve? and why?   [3 marks]

ii. At what values of price and quantity is the market in equilibrium?   [5 marks]

d) Distinguish between price elasticity of demand and cross elasticity of demand. [3 marks]

e) Explain FIVE major sources of monopoly power.   [5 marks]

Question Two

a) Distinguish between "the law of variable proportions" and the law of returns of scale.   [5 marks]

b) Using a suitable diagram, explain the THREE stages of the law of variable proportions.   [10 marks]

c) Briefly explain FIVE assumptions of the law of variable proportions.   [5 marks]

Question Three

a) What is meant by the terms; Economies of scale and Diseconomies of scale?   [5 marks]

b) Write explanatory notes on the various types of internal and external economies of scale.   [15 marks]

Question Four

The total cost equation in the production of popcorns by a retailer in Murang'a is as follows;

$$C = 1000 + 100Q - 15Q^2 + Q^3$$

Where C is cost, while Q is quantity of popcorns.

a) Compute the total and average costs at the output level of 10 and 11 packets   [5 marks]

b) What is the marginal cost of the 12th packet?   [5 marks]

c) Explain the shape and relationship between AC, AVC, MC and AFC curves using relevant diagrams.   [10 marks]

Question 5

a) State the ideal conditions for a perfect market.   [4 marks]

b) Illustrate by use of diagrams the profit maximizing output of a firm in a perfectly competitive market structure.   [6 marks]

c) A watch producing firm in a perfectly competitive market structure has a total tota cost function represented by:

$$C = 100 + Q^2$$

   C is total cost and Q is quantity.

Required:-

i. Average Fixed Cost.   [1 mark]

ii. The number of watches the firm should produce to maximize profits given that the price per watch is Ksh. 600.   [4 marks]

iii. The number of watches the firm should produce to break – even.   [5 marks]

MARKING SCHEME

Question 1.

a) i. Consumer freedom of choice

   ii. Insufficient resources and alternatives

   iii. Value of the foregone

   iv. Graph showing the allocation pf resources to produce a given quantity of output.

b) Free market – Resources are controlled by private individuals with a slight influence
   from the central government.

  Advantages:

 - Efficiency

 - Less costly from the govt' side

 - Less time consuming

 Disadvantages

 - Does not provide public goods.

-Less access to merit goods

 - Controlled systems – Resources are controlled by the central govt'.

Advantages

- Provision of merit and public goods
- Cheaper goods
- Well distributed resources

Disadvantages

- System is costly
- Bureaucratic procedures
- Time wasting
- Low quality goods and services.

c) Demand curve - Q_a

   Supply Curve - Q_b

   Q_b has a positive slope

ii. $Q_a = Q_b$

d) Price elasticity of demand -$\triangle$ in quality as a result of a change in the commodity's own price.
   Gross elasticity – Degree of responsiveness of demand of one commodity to a change in the
   price of a related commodity.

e) – Raw materials

   - Patents and rights

- Copy rights
- Statutes/acts/Government
- Expert skill

Question Three

a) Economies of scale – benefits of large scale production
   Diseconomies of sale – Costs that incur as a result of large scale production.

b) Internal Economies of scale
   - Technical economies
       i. Increased specialization
       ii. Increased dimensions
       iii. Factor mobility
       iv. Principle of multiples
   - Financial economies
   - Marketing economies
   - Risk bearing economies
- External economies of sale
   - Creation of labour force
   - Development of subsidiary industries
   - Disintegration – which leads to specialization
   - Joint researches
   - Provision of commercial facilities.

Question Two

a) As additional units of a variable factor are added to a given quantity of a fixed factor, total output will initially increase at an increasing rate, but beyond a certain level of output it will increase at a declining rate, and will eventually decline. This law of diminishing returns.

b) Stages of production
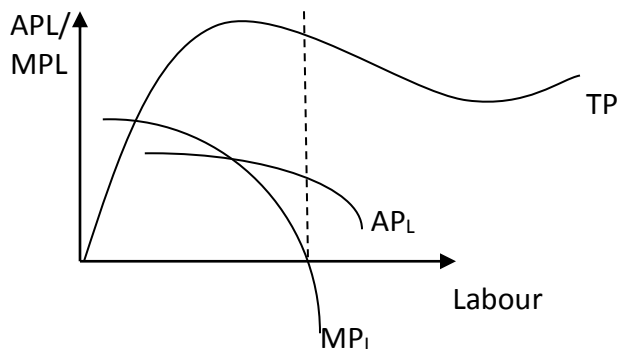
c) – Technology is Fixed
   - Successive units of the variable factor are assumed to be equally efficient.
   - Production takes place in the short – run
   - One factor of production which is variable is considered.

- Only one firm is under consideration.

Question 4.

a. $C = 1000 + 100(10) - 15(10)^2 + 10^3$
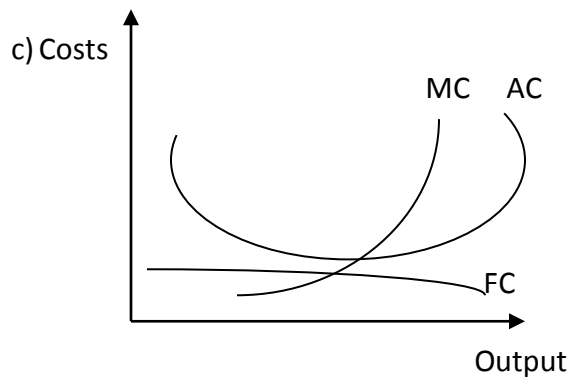
$C = 1000 + 100(11) - 15(11)^2 + 11^{3.}$

AC at 10 mits.

$$\frac{1000 + 100(10) - 15(10)^2 + 10^3}{10}$$

AC at 11 mits

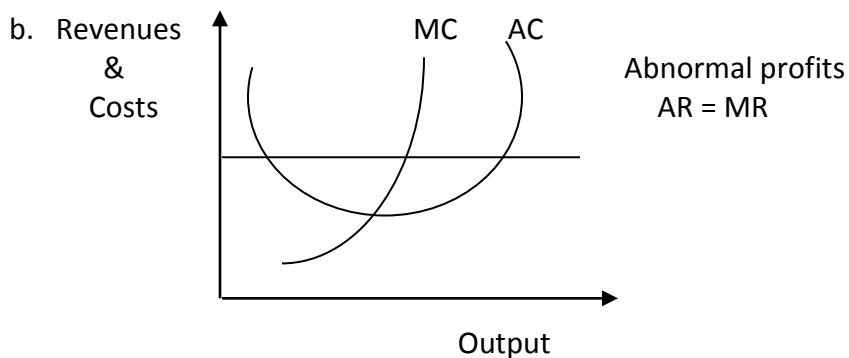$$\frac{1000 + 100(11) - 15(11)^2 + 11^3}{11}$$

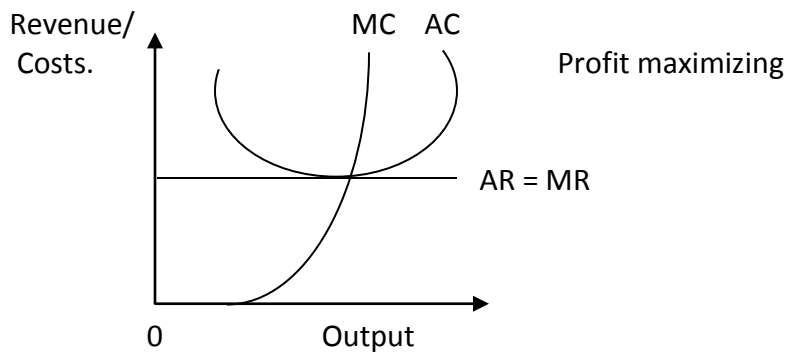b. MC at 12th unit $= 100 - 30(12) + 3(12)^2$

c) Costs

Output

Question 5

a. –Many buyers & sellers
- Consumers have a perfect knowledge of market
- Goods are homogeneous
- Mobility of factors is perfect
- Economic agents are rational

b. Revenues & Costs

Abnormal profits

AR = MR

Output

Revenue/
Costs.

MC   AC

Profit maximizing

AR = MR

0   Output

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SUPPLEMENTARY EXAM.

HBC 2104 – INTRODUCTION TO MICROECONOMICS

DATE: TIME:

INSTRUCTIONS:-
Answer questions One and any other Two questions.

Question one (Compulsory)

i. In the light of adoption of economic liberism in many developing countries, what are the possible shortcomings of relying in free market and on the forces of competition from the standpoint of:

a) Rational allocation of resources.   [5 marks]

b) Income distribution.   [5 marks]

c) Price stability.   [5 marks]

ii. Explain the functioning of a mixed economic system.   [5 marks]

iii. Give the meaning of the term "Price control" and explain the circumstances under which it is considered necessary. Use graphical illustrations.   [10 marks]

Question Two

a) List six factors that give rise to shifts in the supply curve.   [6 marks]

b) The demand and supply curves for television sets in beach city are given as follows:-

$$0.04 = 400 - Q - demand$$
$$0.06 = Q + 500 - supply$$

Required:-

i. Equilibrium price and quantity of television sets.   [6 marks]

ii. With the aid of a diagram, explain the impact of a demand shift to the values in (i) above

Question Three

Explain with the help of diagrams the concept of consumer equilibrium. Using indifference curve analysis, distinguish between the income and substitution effects of a price change.   [20 marks]

Question 4

A watch manufacturing firm in a perfectly competitive market has a total cost function represented as follows;

$$C = 100 + Q2$$

and C – total cost

Q- Quantity.

Required:
i. Average fixed cost.   [3 marks]

ii. Number of watches the firm should produce to maximize its profit, given that
the price per watch is Ksh. 600.   [6 marks]

iii. The number of watches the firm has to produce to break – even.   [6 marks]

iv. Illustrate (iii) graphically   [5 marks]

Question 5
Present carefully the law of variable proportions. What are the key assumption that
underlie this law? Discuss fully the three stages associated with this law.   [20 marks]

MARKING SCHEME
INTRODUCTION TO MICROECONOMICS (HBC 2104)
**SUPPLEMENTARY EXAM**

Question 1.
i. a. – Gives rise to development of monopolies
   - Externalities are not accounted for
   - Under provision of public goods
   - Under provision of merit goods
   - Socially undesirable goods are produced.

 b. - Unequal distribution
   - Gap between rich and disadvantaged is wide.

 c. i. Determination is through the forces of demand and supply.

   ii. – Combines free market and planned systems.
     - Resources mostly owned privately but controlled by a central government.

  iii. Government regulation of equilibrium prices.

  a) Minimum Price Control – set above the equilibrium price.
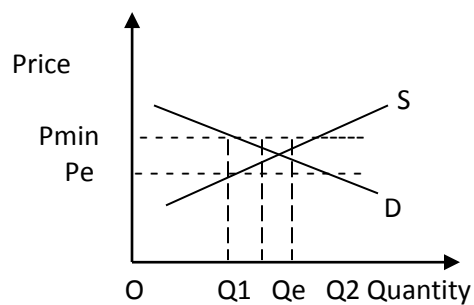
  b) Maximum price control – set below the equilibrium price.
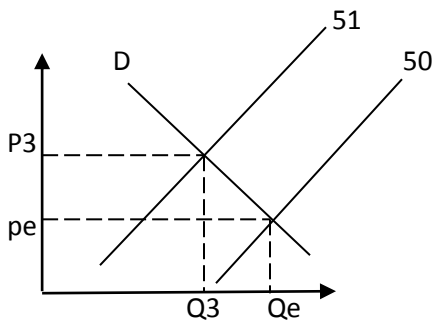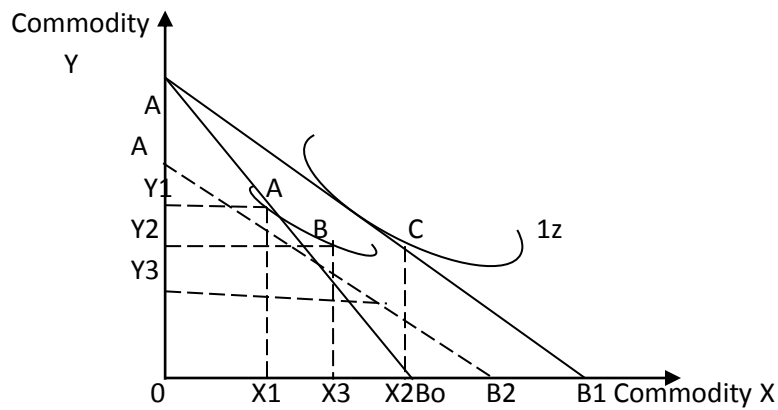
Price, Pe, Pmax, S, D, 0, Q, Qe, Q2, Quantity
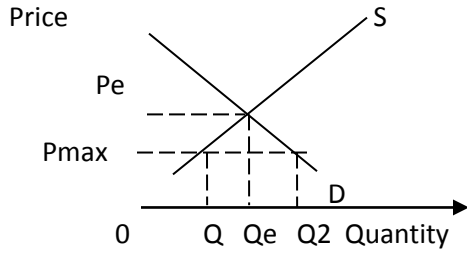
Question Two

a) - Decrease in demand – changes in weather – Price changes

- Changes in taste – Government regulation – strike incidences
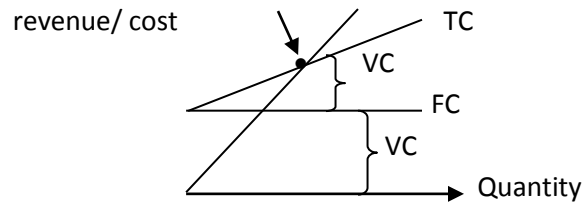
ii) Supply = Demand.

D, 51, 50, P3, pe, Q3, Qe

Question Three

Commodity Y

A, A, Y1, A, Y2, B, C, 1z, Y3, 0, X1, X3, X2Bo, B2, B1 Commodity X

Question 4

i. 100/4

ii. MR = MC

iii. At break – even, TR = TC

iv.   B.E.P   R

revenue/ cost   TC

VC

FC

VC

→ Quantity

Question 5.
Law of variable proportions . As more and more units of a variable factor are added to a fixed factor, total output will initially increase but at a certain level, it will increase at decreasing rate.
Assumptions:
-   Technology is fixed
-   Equally efficient successive units
-   Short – run production period
-   One variable factor of production.