SOLUTION – ECONOMICS MAY 2009

Suggested Answers

QUESTION 1

a.

i) Two commodities are jointly supplied when an increase in the supply of one results in an increase in supply of the other as well. In other words the two goods are produced together as a package.

On the other hand two goods are in competitive supply when an increase in the production of one of the goods leads to a decrease in the supply of the other.

ii) A decrease in supply means that at the same price (or any other price) less quantity of the commodity is supplied. While a decrease in quantity supplied occurs when the price of the commodity falls and quantity supplied falls as well.

A decrease in supply shifts the supply curve to the left while a decrease in quantity supplied is a downward movement along the same supply curve.

b.

i) The cost of inputs. If input prices rise, producers will be less willing and able to produce goods at the prevailing price. Supply will decrease.

ii) Weather or natural environment: this is particularly important for agricultural products. Drought or excessive rain fall, or pests and disease can lead to a severe fall in agricultural products.

iii) The prices of related goods:

- Competitive supply or substitutes in production are goods that can be produced using the same factors of production. Thus if the price of one rises,

producers are encouraged to switch their inputs out of the production of the good whose price has not changed. The supply of the good whose price has not changed will decease vice versa.

or

- Complements in production or joint products are produced together. A fall in the price of one will lead to a fall in the quantity supplied of that product. However since the two are produced together the supply of the second product will decrease.

iv) Change in Technology. Use of old and obsolete machines which breakdown frequently can reduce supply.

v) Price expectations: If expectations are that price of the product will rise supply by the firm will fall vice versa.

QUESTION 2

a)

i. Large numbers of buyers and sellers

The industry or market includes a larger number of firms (and buyers), so that each individual firm, however large, supplies only a small part of total quantity offered in the market. The buyers are also numerous so that no individual buyer can affect the working of the market. Under these conditions, each firm alone cannot affect the price in the market by changing output.

ii. Product Homogeneity

The Industry is defined as a group of firms producing a homogeneous product or standardized product. The assumptions of a large number of sellers and product homogeneity imply that the individual firm in perfect competition is a *Price Taker* rather than a price maker. In Perfect Competition price is set by industry - wide supply and demand; the perfect competitor can take it or leave it.

iii. Free entry and exit of firms (Perfect Mobility of Firms)

Under perfect competition, there is perfect mobility, and none of these barriers exists. In other words, there is no barrier to entry or exit from the industry. Entry or exit may take time, but firms have freedom of movement in and out of the industry or market.

iv. Perfect mobility of factors of production:

The factors of production are free to move from one firm to another throughout the economy. It is also assumed that workers can move between different jobs, which imply that skills can be learned easily. Finally, raw materials and other factors are not monopolized and labour is not unionized. In short, there is perfect competition in the market of factors of production.

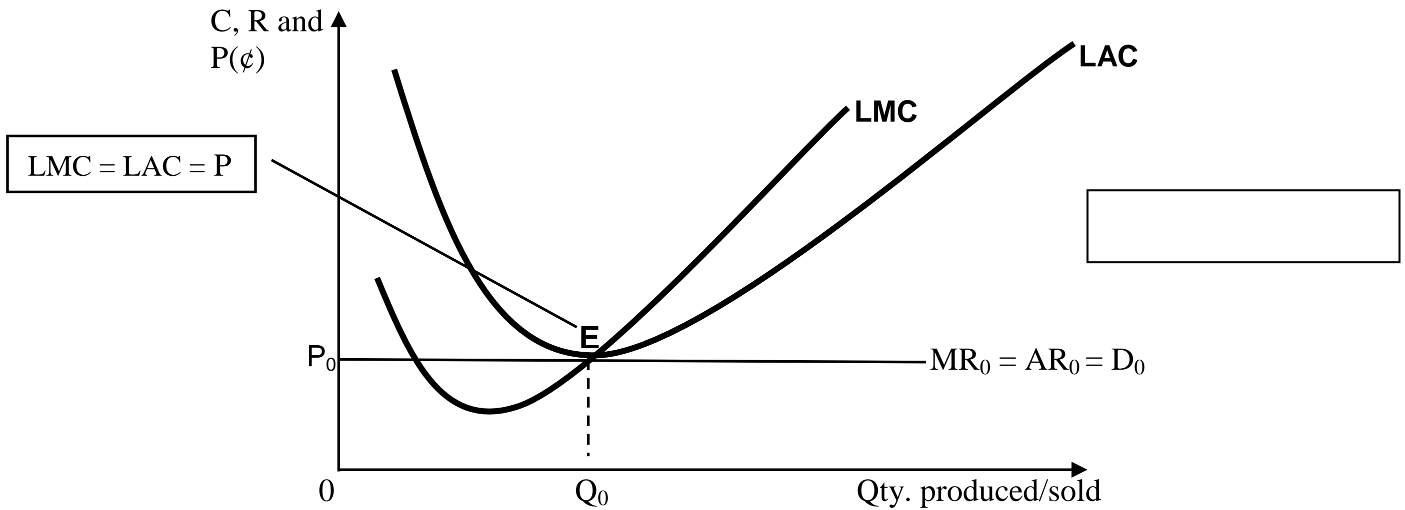
v. Perfect Knowledge:

It is assumed that all sellers and buyers have complete knowledge of the conditions in the market. Everyone knows about every possible economic opportunity.

b) Long run Equilibrium of the Firm

In the long run, all inputs are variable and the firm can build the most efficient plant to produce the best or most profitable level of output . The most efficient plant is the one that allows the firm to produce output at the lowest possible cost. The condition for the long run equilibrium of a representative firm in competitive market is that the long-run marginal cost (LMC) must be equal to the price (P) and to the long-run average cost (LAC). That is **LMC = LAC = P**

Figure: The Long run Equilibrium of a Representative Firm



In the Figure, the representative firm is in long-run equilibrium earning normal profit, because **LMC = LAC = P.** Under this condition, there is no way by which the representative firm in the long-run equilibrium can earn abnormal profit (economic profit) or incur loss. If either of the two occurs then it is transitory and will finally give way to normal profit in long-run.

The firm produces at the minimum point on the LAC curve. This shows that the perfect competitive firm exhausts economies of scale.

QUESTION 3

a. When increasing quantities of a variable factor are added to fixed quantities of some other factors, the marginal returns (marginal product or marginal output) of the variable factor will rise and after some point diminish or fall, all other things being equal.

b.

i) Increasing marginal returns: As successive units of the variable factor are added to the fixed factor the marginal product continues to rise. This shows that production is taking place under conditions of increasing marginal returns to the

variable factor. The point of maximum marginal product indicates the end of increasing marginal returns to the variable factor.

ii) As successive units of the variable factor are added to the fixed factor, the marginal product begins to fall and total product increase at a diminishing rate. The point of maximum total product indicates the end of decreasing returns to the variable factor.

iii) As successive units of the variable factor are added to the fixed factor after the total product had reached the maximum point, the marginal product becomes negative.

QUESTION 4

a. Privatization refers to the transfer of publicly-owned assets (such as factories, banks, telecommunication facilities) to the private sector. Privatization usually involves the sale to private owners, of industries or businesses which were previously owned by the state and accountable to central government. (Some economists extend the definition of privatization to included liberalization programmes such as deregulation and contracting out certain services formerly performed by public workers).

b.

i) revenue raising: privatization or the sale of state owned assets provides the government with short term source of revenue.

ii) the promotion of competition: privatization, it is argued promotes competition through the breakup of monopoly.

iii) reducing public sector spending and the public sector borrowing requirement.

iv) Promoting enterprise culture: One important reason for the privatization (or divestiture) programme is the motive of promoting an enterprise culture through extending share ownership to individuals and employees so as to widen the stake in supporting private enterprise economy.

v) The promotion of efficiency: it is argued that public ownership gives rise to some special forms of inefficiency which disappear once an enterprise moves into the private sector-even if the industry remains a monopoly. It is argued that the 'culture' of public ownership makes state enterprises resistant to change, and that state owned industries tend to be run in the interest of workforce protected from market or commercial discipline. By exposing the business to the threat of take over and the discipline of the capital market, the privatization of state-owned monopoly should improve efficiency and commercial performance.

c.

i) loss of employment

ii) loss of long term revenue to government

iii) selling the nation's "family" treasure

iv) can lead to the creation of private monopoly

v) loss of strategic firms to foreigners

QUESTION 5

a.

i) Legal tender is money (or any item) which by law must be accepted in exchange of goods and services and in settlement of debt up to any amount.

A cheque on the other hand is an order written by a customer (the drawer) to a commercial bank to pay on demand a specified amount to the bearer, (a named person or institution)

ii) A currency that can legally be exchanged for another or for gold while fiduciary issue is paper money not backed by gold or silver.

b. The functions of commercial banks include:

i) Accepting deposits: The deposits received by the banks may be:

- demand deposit which entitle the customer to the use of cheques to transact business
- saving deposit which attract interest but there may be restrictions as to number of times one can withdraw money from the account
- fixed or time deposit which are made for a fixed period of time. N withdrawal can be made from such an account before the expiry of the period stated.

ii) Lending to customers: commercial banks make advances or loans to customers in the following ways

- loan account
- overdraft
- discounting bills of exchange

iii) transfer of money

iv) trustee and executor facilities

v) sale of foreign exchange

vi) purchase and sale of securities

vii) credit card facilities

QUESTION 6

a.

i) The budget is the government's plans or estimates for its expenditure during the year ahead and its proposals for financing these expenditures.

ii) The national debt is the total amount of money owed by the public government sector (government). This is normally split into domestic debt that is, what the state owes to its nationals and external debt, that is what the state owes to foreigners.

b. Some of the reasons why government spending has been increasing are:

i) development activities of the government e.g. construction of roads
ii) expansion of the public sector (e.g. parliament, NCCE etc.)
iii) increase in population
iv) crisis management e.g. Bawku and Northern Region conflicts
v) trade union activities
vi) rising debt servicing
vii) external shocks (e.g. crude oil price hikes)

QUESTION 7

a.

i) A **leakage** of spending represents a portion of income that is not used to purchase domestically produced goods and services during the year. In an open economy there are three main types of leakage of spending power from the circular flow: These are net taxes, savings and imports.

ii) **Injections** of spending are purchases made by business firms, governments or foreign buyers that increase the flow of income in a nation. Injections of

purchasing power increase aggregate expenditure in the economy. These injections are in the form government expenditure, investment spending and exports.

iii) Transfer payment is any payment within or between sectors of the economy for which there is no corresponding contribution to current output.

b. Nominal GNP is expressed in current price thus reflecting the actual prices of each year. Real GNP on the other hand is expressed in constant prices of a previous period or in base year prices.

c.

1	**2**	**3**	**4**	**5**	**6**
Year	**Units of output**	**Price Per Unit $**	**Price index**	**Nominal GNP $m (2) x (3)**	**Real GNP (5) ÷ (4)**
2000	30	2	0.5 or 50%	60	120
2001	50	4	1.0 or 100%	200	200
2002	60	5	1.25 or 125%	300	240
2003	80	6	1.5 or 150%	480	320
2004	90	8	2.0 or 200%	720	360

i) To calculate nominal GNP multiply output (column 2) by price (column 3) i.e. GNP is 2000 = 30 x 2 = 60

ii) Real GNP is calculated by dividing nominal GNP by the price index of the base year.

Real GNP in year 2000 = 60/0.5 = 120

2001 = 200/0.1 = 200 etc.