SOLUTIONS: ECONOMICS NOVEMBER 2008

Solution 1

There are many problems in life that could be categorized as economic. One of these problems that permeates all other economic problems **is that at any point in time, the human race is faced with many wants but the resources to satisfy these wants are limited.**

This implies that man is confronted with the problem of unlimited wants and limited economic resources giving birth to **the basic economic problem of scarcity of resources in the face of unlimited wants.**

b. In economics choices are unavoidable because of limited economic resources in the face of unlimited wants. **This implies that man and society must deicide on the uses to which to put the scarce economic resources. In doing this rational choices are made to obtain the most out of the relatively scarce resources. Rational choices are made if the society can determine among its many wants the most pressing ones**.

c. Opportunity cost of an item(s) is **the best alternative item(s) forgone** that the **same amount of resources** could be used to **produce or acquire or achieve**.

The best action that **you choose not to do with a given resource – which is the forgone alternative – is the cost of the action that you chose to do with the given resource.**

d. Production Possibility curve indicates **the maximum combinations of two goods** that we can obtain **from a given amount of inputs given a particular state of technology.**

SOLUTION 2

a) In equilibrium $Q_D = Q_S$ [1marks]

$$500{,}000 - 50{,}000P = -100{,}000 + 100{,}00P$$
$$600{,}000 = 150{,}000P$$
$$P = \frac{600{,}000}{150{,}000}$$
$$P = 4$$

The equilibrium price is GH¢4 per litre

The equilibrium quantity is derived by substituting the equilibrium price of 4 into either the demand or the supply equation.

$$Q_D = 500{,}000 - 50{,}000(4)$$
$$Q_D = 300{,}000$$

$$OR$$

$$Q_S = -100{,}000 + 100{,}000(4)$$
$$Q_S = 300{,}000$$

The equilibrium quantity is 300,000 litres.

b)

$$TR = P \times Q$$

$$TR = 4 \times 300000$$

$$TR = 1200000$$

c) This type of price fixing is called Maximum Price or Ceiling Price because the GH¢3 is lower than the equilibrium price of GH¢4.

It becomes the highest legal price to trade in pipe borne water in the city of Accra.

d) The quantity demanded and supplied can be determined by substituting the fixed price into demand and supply equations.

$$Q_D = 500{,}000 - 50{,}000(3)$$
$$Q_D = 350{,}000 litres$$

and

$$Q_S = -100{,}000 + 100{,}000(3)$$
$$Q_S = 200{,}000 litres$$

e) At the fixed price of GH¢3, **the quantity demanded of 350 000 exceeds the quantity supplied of 200 000**. **The market has a shortage of 150 000 litres of pipe borne water.**

Solution 3

a) Profit may be said to be **a return to those who perform the entrepreneurial function; the residual (if any) after payment to factor owners. Secondly profit is the difference between total revenue and total cost.**

b) Accounting profit refers to **the excess of total revenue over total explicit costs.** Economic profit on the other hand refers to **the excess of total revenue over total costs (explicit and implicit costs).**

c) Some functions of profit are:

i. it provides finance: internal finance which mainly consists of undistributed profit is by far the most important source of finance for most firms.

ii. It provides a return to the entrepreneur for risk or uncertainty bearing. In the absence of this (profit) the entrepreneur would not undertake production.

iii. It encourages productive efficiency: profit provides a very powerful incentive to innovate and improve productive efficiency.

iv. It encourages allocative efficiency: profits attract resources to their most productive uses. Where resources are used most efficiently, profits are higher and resources will be competed away from less efficient uses.

Solution 4

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 exist. 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.

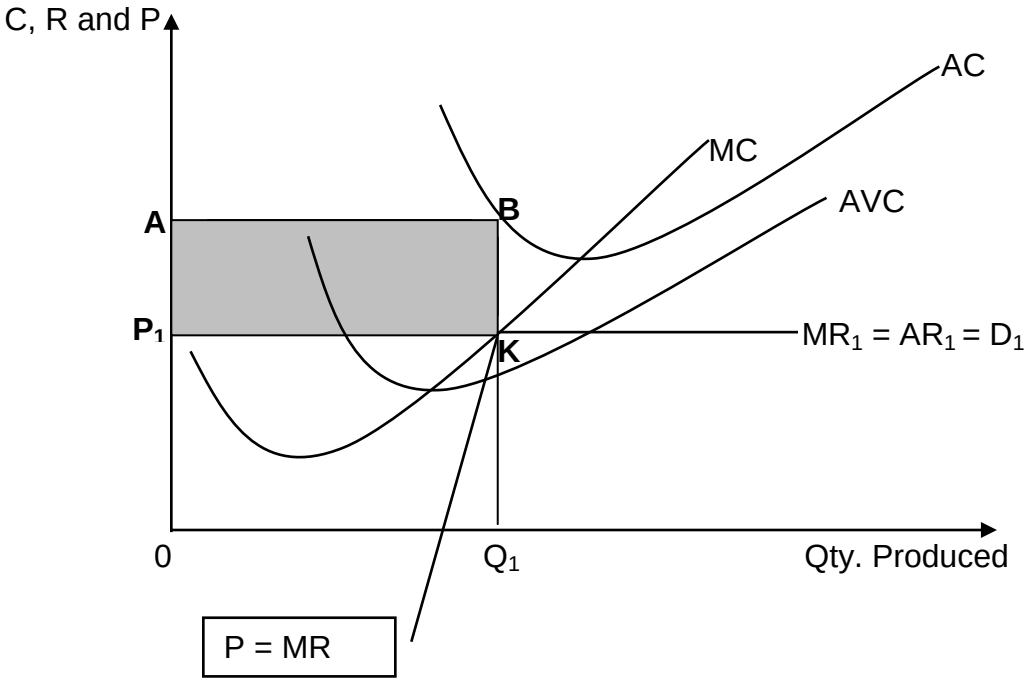
iv. Perfect mobility of factors of production: The factors of production are free to move from one firm to another throughout the economy. It is also assumed that workers can move between different jobs, which imply that skills can be learned easily. Finally, raw materials and other

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)

Figure A: Short-run Competitive Equilibrium with a Loss

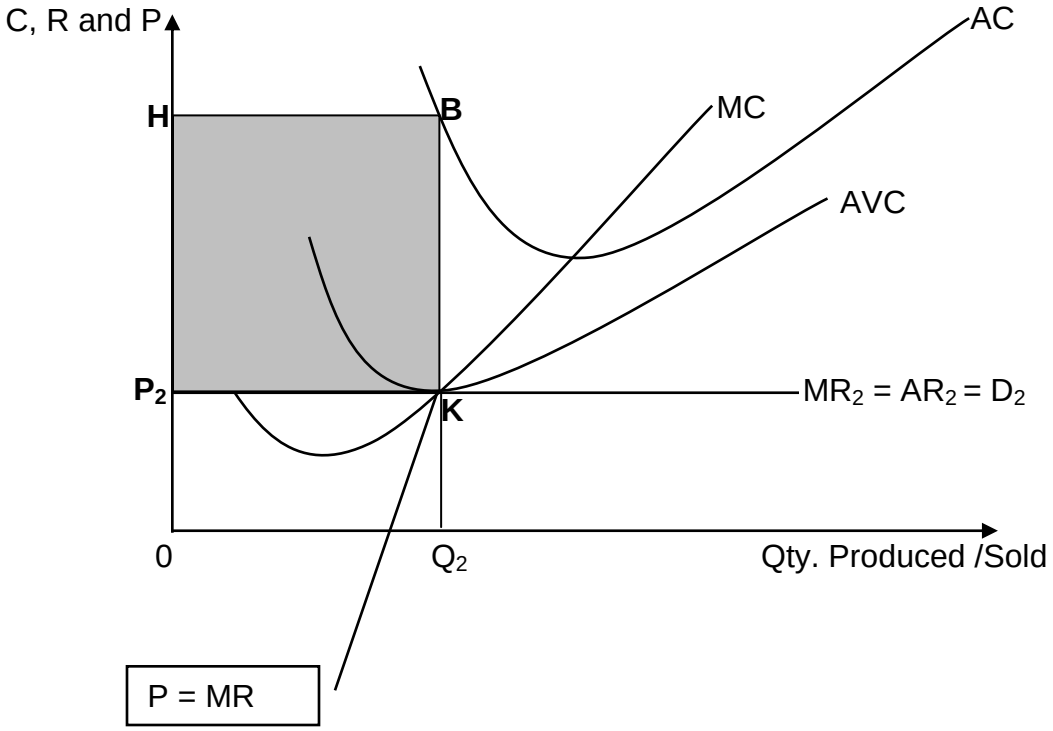


In the Figure A, **the demand curve is D_1= MR_1**. At **the equilibrium output Q_1, unit cost of production (AC) exceeds price (P) but P > AVC.**

There is no way by which the firm can earn profit. In spite of the loss, the competitive firm is in equilibrium with an equilibrium output of Q_1. **In this case the loss is smaller than the total fixed cost that the firm will have incurred as losses if it stops production.**

ALTERNATIVELY: A candidate can use the shutdown point

Figure B**:** Short-run Competitive Equilibrium with a Loss



In the Figure B, **the demand curve is D_2= MR_2**. At **the equilibrium output Q_2, unit cost of production (AC) exceeds price (P) but P = AVC.**

There is no way by which the firm can earn profit. **In spite of the loss, the competitive firm covers its total variable cost fully in equilibrium with an equilibrium output of Q_2. In this case the firm is at its shutdown point and stays in business.**

Solution 5

a) Fiscal policy refers to the use of **taxation**, **government expenditure** and **government borrowing** to achieve **some macroeconomic objectives**.

b) There are many reasons why government imposes taxes. Some of these are:

i) Revenue Raising: taxes are normally the most important source of government revenue. It is probably the oldest objective of government taxation.

ii) To Discourage Specific Activities:

- To reduce the consumption of goods that is perceived to have adverse effects on the health of consumers. e.g tobacco, alcohol etc. high taxes are imposed on such items.
- To protect the environment: some productive activities can pollute the air, water bodies etc. taxes can be used to force the offending producer to use cleaner methods or to migrate to other counties which have the potential for causing social discontent and unrest, these include items described as luxurious or conspicuous items such as certain types of very expensive car.

iii) Alter the distribution of income: unregulated market forces can lead to serious disparities in income distribution which may be socially undesirable. The government may decide to tax the wealthy more heavily than the relatively poor members of the community. These taxes include taxes on income, property etc.

iv) Discouraging Imports: these taxes are called tariffs and are usually used to protect domestic production from goods

produced out-side the country. These taxes make the imported items to be more expensive in the importing country compared with local substitutes. Governments use this measure to restrict access to their markets by efficient foreign producers.

v) To correct market failure. Government may use taxation to correct various market failures.

- Tax monopoly profits, both to defer monopoly and to remove the windfall gain accruing to the monopolist as a result of barriers to entry.
- Provision of public goods and merit goods: the market mechanism might fail to provide public goods such as roads and security, while health care, education and other merit goods might be under consumed.

vi) To stabilize the economy. Some economists (Keynesians) advocate the use of taxation, public spending and the budget deficit as policy instruments in a discretionary fiscal policy aimed at controlling the level of aggregate demand to achieve the objectives of full employment, price stability etc.

Solution 6

a. GDP is **a measure of the monetary value of all final goods and services produced in a country during a specified period, usually one year irrespective of whether the output was produced by residents or non residents.**

GNP refers to the monetary value of all final goods and services produced by citizens of the country over given period of time normally one year.

The distinction between GDP and GNP is that GDP includes contribution of foreigners in the country and excludes contribution of citizens outside. GNP on the other hand excludes contribution of foreigners in the country and includes contribution of citizens outside.

Alternatively GNP is simply GDP as defined above less the output contributed by foreigners plus output produced by the country's nationals to other countries.

b. Some uses of national income data are
   i) For economic planning countries use national income data in embarking on both short and long term planning
   ii) It reveals functional income distribution which helps the government to know the form of tax to be adopted.
   iii) For sectoral comparison: data collected from each sector, the progress of all the economic sectors can be compared.
   iv) For estimation of per capita income which is used as a measure of the standard of living of the people.
   v) For estimation of growth of the economy
   vi) For comparison of economic growth among nations.
   vii) The per capita income obtained from the national income data is used to determine the contribution of countries to international organizations.

Solution 7

(a) Inflation is defined as **a persistent and appreciable increase in the general price level.**

(b)

i) Irrespective of its causes, a rise in the rate of inflation can impose a number of harmful effects on business, although the precise extent to which these are realised will be affected by the degree of unemployment in an economy.

The key effects are likely to include the following:

- declining export competitiveness
- less real purchasing power in the economy.
- increase macroeconomic uncertainty
- it will undermine business investment
- wage–price spirals may also ensue.

ii) An increase in government spending may have a number of direct effects on business, not all of which are positive, for example:

i.

- sales might increase;
- prices of final products (and inputs) might rise;
- Indirect effects might include inflationary pressures falling exports and
- if the increase in spending is debt financed, there may be concerns about future increases in taxes and their negative effects on sales growth and profitability.