Economics paper 1 set 5 and marking guide

1(a) Explain the following terms as used in economics

(i) Laissez faire
It is an economic principle where all economic activities are guided by market forces of demand and supply. The price system is allowed to determine economic activities without any government interference. For instance, if demand for any given product exceeds the product's supply, ceteris paribus, prices will likely rise.

(ii) Ceteris paribus
Ceteris paribus is a Latin word meaning "other factors remaining equal or constant". It is a term used to analyse the relationship between economic variables, assuming all the values of other influencing variables are constant.

(b)(i) Distinguish between consumer surplus and diminishing marginal utility

Consumer surplus is the additional benefit a customer get when he pays less than he/she **willing and able** to pay for a good.

Diminishing marginal utility is a situation where the consumption of each successive unit of a commodity consumed yield less and less satisfaction than the previous units. For instadnIf you're starving, an apple offers pretty high value. But the more apples you eat, the less hungry you become — Making each additional apple less valuable.

(ii) Explain how the two are related.

As the marginal utility diminishes consumer's surplus also decreases because the consumer would be prepared to pay less for the additional commodities consumed.

(c)(i) Calculate the cross elasticity of demand if the price of a commodity P falls from Ugshs 1000/= to Ugshs. 800/= per unit and the quantity demanded of commodity Q increases from 20 to 30 units per day.

Cross elasticity of demand = $\frac{change\ in\ quantity\ demanded\ of\ Q}{change\ in\ price\ of\ P} x \frac{P_1}{Q_1} = \frac{30-20}{800-100} x \frac{1000}{20} = -25$

(ii) How are commodities P and Q related

Commodities P and Q are complements (because negative value e.g. car and petrol, bread and butter.

(d)(i) Distinguish between vertical and horizontal integration of firms.

Vertical integration is the merging or coming together of firms operating at different stages of production process within the same industry

Horizontal integration is the merging or coming together of firms operating at the same stage of production process, producing related or similar products.

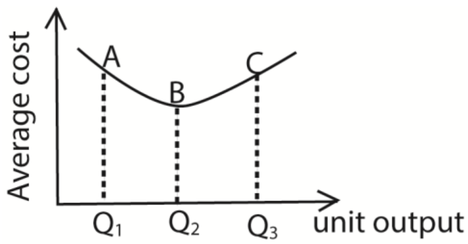
(ii) Give advantages of integration of firms

- Firms enjoy economy of scales
- Merging firms reduce competition leading to low cost of production and high profits
- Improves managerial skills
- Widen capital base
- Sharing possible risks
- More employment opportunity created

(e) Explain why average total cost (ATC) curve of perfect competition firm is U-shaped in the

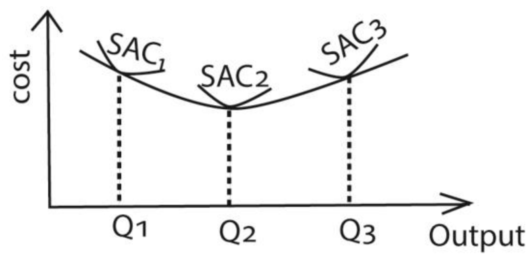
(i) short run

In the short run, ATC curve is U-shaped because initially at A, ATC is high because fixed costs are all incurred before any production takes place, it decreases to minimum at B due to the law of variable proportions since ATC = AFC + AVC and after ATC increases, because of diminishing marginal productivity.



(ii) long run

In the long run, ATC curve is U-shaped; i.e. ATC decreases because of economies of scale and then increases because of diseconomies of scale



(f) Explain the meaning of the following

(i) Aggregate money demand in e closed economy

Aggregate money demand in a closed economy refers to the total amount of money needed by households, firms and government for the purpose of consumption, investment and government spending

Agg. Money dd = C + I + G

(ii) Aggregate money demand in an open economy is the total amount of money required to finance consumption, investment, government spending and net external balance of trade

Agg. Money dd = C + I + G +(X – M)

(g)(i) What is meant by term investment?

An investment is the purchase of goods that are not consumed today but are used in the future to generate wealth. Or Investment refers to an addition to existing stock of capital. It is the flow of expenditure devoted to projects producing goods which is are not intended for immediate consumption e.g. factories.

(ii) Why is expenditure on education and health regarded as investment?

- They have an opportunity cost
- They cost money
- Involve risk and uncertainties
- They involve time preference
- They increase society's quality of life once acquired
- They generate profitable returns in future

Education lead path towards health, empowerment, and employment. Evidence shows that each additional year of education boosts a person's income by 10% and increases a country's GDP by 18%.

(h)(i) State Irving Fisher's Quantity theory of money.

Irving Fisher's Quantity of theory of money states that the general price level of goods and services in an economy varies directly with the quantity of money in the circulation.

MV = PT
P = MV/T

Where M = quantity of money in existence,

V = the transactions velocity of money which means the average number of times a unit of money turns over or changes hands to effectuate transactions during a period of time.

P = average price or price level

T = total number of transactions or the total goods and services transacted.

(ii) Given that the amount of money in circulation is 200 million Ugshs. And its velocity is 10 and the level of transaction is 40,0000. Calculate the general price level of economy

P = $\frac{MV}{T} = \frac{200{,}000{,}000\ x\ 10}{40{,}000} = 50{,}000\ Ugshs.$

(i) (i) what is meant by dual exchange rate?

A dual exchange rate system is where there are two exchange rates in an economy, one of which is favourable and meant for priority or essential sectors and the other for non-priority sectors in the same period.

(ii) Explain why an economy may adopt a dual exchange rate system.

- To discourage the importation of harmful and luxurious goods.

- Making foreign exchange readily available to all categories of importers and investors
- Promoting investment in the economy
- Promoting growth of domestic industries
- To lessen pressure on foreign reserves during an economic shock that results in capital flight by investors. The hope would be that such a system can also alleviate inflationary pressures and enable governments to control foreign currency transactions.
- It is a way to control local inflation and importers' demand for foreign currency.

(j) (i) What is a turnover tax?

A turnover tax is tax imposed or levied on gross sale of a business in a given period, usually a year i.e. it is levied on transaction that are said to have taken place in a year. In Kenya; Turnover Tax (TOT) is a tax charged on gross sales of a business as per Sec.12 (c) of the Income Tax Act. The tax is payable by resident persons whose gross turnover is more than Ksh 1,000,000 but less than Ksh 50,000,000 in any given year.

(ii) Distinguish between sales tax and capital gains tax.

Sales tax is a tax imposed on total sales of business or A **sales tax** is a consumption tax imposed by the government on the sale of goods and services.

The capital gains tax is the levy on the profit that an investor makes when an investment is sold

2. (a) Distinguish between price control and price discrimination.

Price control is the act by which the government fixes prices of commodities with the aim of either protecting consumers (maximum price)or protecting the producer (minimum price).

Price discrimination is the process (practice) of selling the same commodity to different consumers at different prices by the same seller in a given period of time, for reasons not associated with costs. For example prices of entertainment tickets at different costs for public and students or children and adults.

(b) What are the necessary conditions if price is discrimination is to succeed?

Price discrimination is the process (practice) of selling the same commodity to different consumers at different prices by the same seller in a given period of time, for reasons not associated with costs. For example prices of entertainment tickets at different costs for public and students or children and adults.

- The commodity should not have close substitute.
- Businesses must prevent resale. Prevention of re-sale could be enforced in many different ways. For example students can only receive student discounts with a legitimate student ID, children can easily be identified from adults.
- The market in question must be geographically distant /spatially separated in case of seats for football or entertainment such that it is easy for monopolist to charge different prices in the different market places
- There should be different elasticities of demand in the different markets.
- Ignorance among customers about other markets
- The seller or producer must be a monopolist or the market must be imperfect.
- Personal services that can be resold or transferred e.g. medical Doctor, teacher, entertainment etc.

- Product differentiation; artificial differences made on similar products by a way of branding, trademarks.
- Low transport costs also lead to monopoly power in that goods can be transferred from one market to another without affecting their prices.

3(a) What are the salient features of monopolistic competition?

- Large number of buyers and sellers
- Free entry and exist of firms
- Product differentiation or branding
- There are many suppliers of the different brands
- No firm has full control over the price
- Firms deal in close substitutes performing the same purpose e.g. bathing soaps
- Firms operate at excess capacity in the long run
- Firms face a downward slopping demand curve which is more elastic that of a monopoly.
- There is persuasive advertisement
- There is no government intervention in fixing prices of commodities produced.
- Lack of Perfect Knowledge
- Less Mobility
- More Elastic Demand

(b)Explain how price and output are determined under monopolistic competition in the

(i) Short run

Short-run refers to that period in which a monopolist cannot change the fixed factors. However, the monopolist is free in determining price due to lack of competition

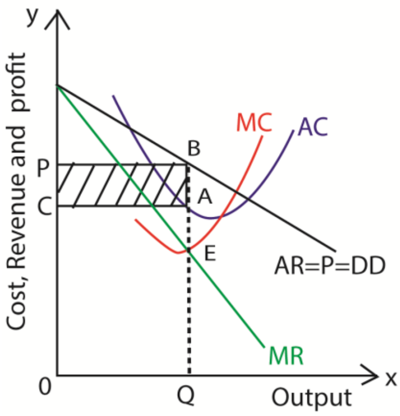
In short run equilibrium whether the firm makes an abnormal profit, normal profit or loss, it depends on the level of AC and AR which can be shown as follows:-

- If AR=AC, the firm receives a normal profit.
- If AR> AC, the firm receives abnormal profit.
- If AR< AC, the firm bears the loss.

The following conditions must be fulfilled in order to attain equilibrium under monopoly:-

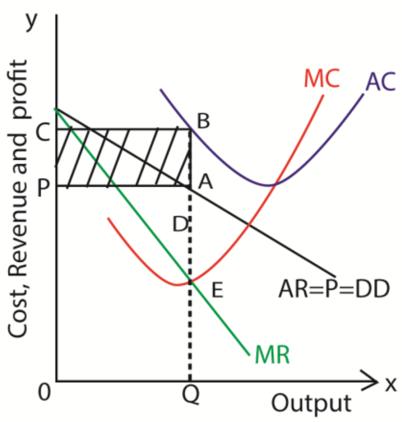
- MR must be equal to MC
- MC must intersect MR from below.

The equilibrium position of a monopoly firm can be graphically presented as follows:-



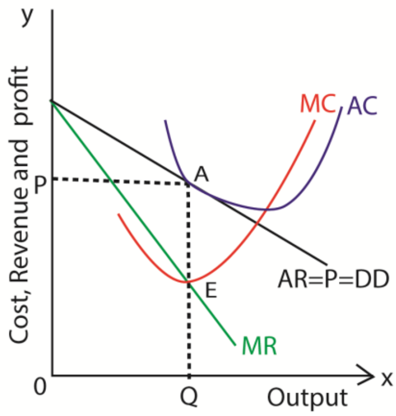
Abnormal Profit

Fig. (a)



Loss

Fig. (b)



Normal profit

Fig. (c)

Abnormal profit

In the first Fig. (a), the equilibrium point is 'E' when MC cuts MR from below. The equilibrium level of output is determined at OQ. The level of revenue earned is OP and the cost incurred is OC. Since Revenue is greater than cost, the firm earns abnormal profit equal to the shaded area (ABPC).

Loss

In the second figure, point E is the equilibrium point where MC intersects MR from below. The equilibrium level of output is OQ. The cost incurred is OC and the revenue earned is OP. Since cost is higher than revenue, the firm bears loss equal to the shaded area (ABCP).

Normal profit

In the third figure, we can see that the equilibrium point is at 'E' where the conditions for equilibrium are fulfilled. The equilibrium level of output is OQ. The revenue and cost are at the same level (OP). The firm earns just a normal profit to sustain its business in the long run.

(ii) long run

The firm earns normal profit because of the free entry of new firms; the supplier's substitutes enter the market, so demand is shared among more brands.

4(a) Define the term investment multiplier

It is the number of times a given change in investment (ΔI) will multiply itself to generate an additional increase in income (ΔY) and employment in an open economy.

Or

Investment multiplier refers to the number of time by which the increase in output or income exceeds the increase in investment i.e. investment multiplier = $\frac{\Delta Y}{\Delta I} = \frac{1}{1-MPC} = \frac{1}{MPS}$

High MPC leads to a higher the investment multiplier or spending on other parts of the economy. This stimulates wider economic growth from the initial investment.

The reason the businesses are associated with a higher investment multiple is that their MPC is higher than that of their workers. In other words, they spend a greater percentage of their income on other parts of the economy, thereby spreading the economic stimulus caused by the initial investment more widely.

Relevance of investment multipliers

- Multiplier helps in estimating the increase in income as a result of increase in investment
- Multiplier theory takes investment as the important factor of the economy. The proportionate increase in the level of income and employment in the economy depends up on the multiplier. That is increase in income and employment is due to increase in investment.
- Analysis of trade cycle: It is easier to analyses trade cycle on the basis of multiplier. Multiplier helps in estimating the increase in income as a result of increase in investment. So, multiplier will be of great importance in formulating progressive policies to bring the effects in the economy to right speed.
- Formulation of economic policy: The main objective of every economic policy is to create the situation of full employment in the economic. Therefore policy makers will formulate their country's economic policy using the multiplier. This will help in creating the situation of full employment.
- Public investment: Public investment is of great importance specially in the situation of depression and unemployment, because this does not stress much on profits. Multiplier indicates the importance of public investment in increasing the level of employment.
- Equality between saving and investment: The equality between saving and investment can be brought about with the help of multiplier. Increase in investment increases the income. Increase in income will bring about equality in saving and investment.

(b) Study the table below showing change in the level of income, consumption and saving in an economy and answer the questions that follow

Time period	Change in income ΔY('000 USD)	Change in consumption ΔC('000 USD)	Change in savings ΔS('000 USD)
A	100,000	80,000	20,000
B	-	-	-
C	-	-	-
D	-	-	-

Given that marginal propensity to consume (MPC) is 80% and change in income is 100,000,000USD

(i) Calculate the change in the level of income, consumption and savings for the period B, C and D to complete the table. (Showing working) (12marks)

In Period B

ΔY = 80,000,000

MPC = 80%

MPC = $\frac{\Delta C}{\Delta Y}$

ΔC =MPC x ΔY

ΔS = ΔY – ΔC

= 80,000,000 – 64,000,000

= 16,000,000

Or S = MPS x ΔY

= $\frac{20}{100} x 80{,}000{,}000$

= 16, 000, 000

$=\frac{80}{100}x80{,}000{,}000$

=64, 000,000

In Period C

ΔY = 64,000,000

MPC = 80%

ΔC =MPC x ΔY

$=\frac{80}{100}x64{,}000{,}000$

=51,200,000

ΔS = ΔY – ΔC

= 64,000,000 – 51,200,000

= 12,800,000

In Period D

ΔY = 51,200,000

MPC = 80%

ΔC =MPC x ΔY

$=\frac{80}{100}x51{,}200{,}000$

=40,960,000

ΔS = ΔY – ΔC

= 51,200,000– 40,960,000

= 10,240,000

(ii) State the multiplier when the MPC is 80% (3marks)

K = $\frac{1}{1-MPC}=\frac{1}{MPS}=\frac{1}{0.2}=5$

(iii) Calculate the overall change in the level of income in economy (3marks)

$=\frac{1}{0.2}\ x\ 100{,}000{,}000=500{,}000{,}000USD$

5. (a) Explain the Malthusian population theory (06 marks)

Malthusian theory of population is a theory that explains the consequences of population that grows at a geometric rate, while food supply growing at arithmetic rate and that at a given point of time, the population would outstrip the means of subsistence leading to starvation and death

Observations made by Malthus

- According to Malthus, population grows at a geometric rate for example at 2, 2^2, 2^3, 2^4 etc.
- Food supply grows at arithmetic rate for example, 2, 4, 6, 8, etc.
- He observed that population growth depends on food supply, i.e. when food supply increase population growth increases
- He explained that time would come when the population growth rate would equal to food supply and if the population exceeds food supply there will be suffering and starvation.
- He attributed the increasing poverty, low wages and unemployment of that time to increase in population.
- He advises a need for world intervention to control population growth using preventive measures such as late marriage and family planning.
- He observed that if attempts are made to improve food supply, health care, shelter, etc. population growth may increase since people feel contented.
- He discourage foreign aid in catering for increasing population because people would escalate basing on this aid

(b)Examine the relevance of the Malthusian theory to developing countries. (14marks)

- The theory suggested some measures to population growth such as family planning late marriage which are being implemented in Uganda
- LDCs are concerned about the danger of over population of which Malthus was mindful
- There are low wages, poverty, and unemployment in LDCs that could have resulted from high population growth.
- He predicted starvation, suffering and death and unemployment in LDCs that have their origin from over population.
- He assumed that land is fixed in supply. In LDCs, land productivity is fixed due to poor technology.
- He predicted mass starvation, suffering and death. These have been experienced in LDCs in one way or another, for example there have been several ways in Uganda since independence.
- In some parts of Uganda it is true that population growth rate is very high like in Kigezi and Bugisu, low of diminishing return is in operation hence justifying fears Malthus.
- In LDCs, it is true that population is growing at a faster rate than food production. This justifies Malthus observation that food grows at an arithmetic rate while population grows at geometric rate.
- He prophesized that an improvement in health care and food supply would lead to an increase in population. This is true in Uganda where immunization programs have led to an increase in population due to the fall in infant mortality rate.

However, to some extent, the theory is not applicable to LDCs due to the following facts

- He assumed that resources e.g. land are fixed and therefore food production cannot increase faster than population but ignored that the quality of resources can be improved.
- He ignored the fact that improvement in technology lead to increase in food production
- The ignored the fact that continuous supply of food can obtained from international trade.
- He assumed that food is not the only determinant of population growth; there are other factors such as immigration, levels of education, and cultural beliefs.
- Foreign aid may not necessarily increase population in developing countries like Africa, because not all foreign aids are used in food production
- Malthus never indicated the time when the population trap would occur which means the theory is in waiting for the reality to occur.
- In spite of population increase, the standards of living of people have been raising in many countries which is contrary to Malthusian theory.
- The modern medicine and public health programs have reduced the death rate and therefore population increase does not show a define relationship with income per capita.
- The theory was developed in Britain and has never been experimented in developing countries and probably not substantial in developing countries.

6(a) What is consumer price index?

Consumer price index is the measure of the relative changes in retail prices of basic needs from the base year to another given year.

Or

The Consumer Price Index (CPI) measures the general change in consumer prices based on a representative basket of goods and services over time from a chosen year

(b) Examine the problems encountered in the compilation of consumer's price index

- Selection of base year when prices were stable, it should be free from abnormal conditions like wars, famines, floods, political instability, etc.
- Selection of Commodities in a basket: the items selected should be
  - representative of the tastes, habits and customs of the people.
  - be recognizable,
  - stable in quality over two different periods and places.
  - The economic and social importance of various items should be considered

- Difficult in choosing the representative families, from where necessary data has to be collected.
- Variations of prices with seasons.
- Choice of the prices to be collected whether wholesale prices or retail prices
- Selection of Average whether arithmetic or geometric means. Theoretically, geometric mean is the best for this purpose. But, in practice, arithmetic mean is used because it is easier to follow.
- Selection of Method: whether simple index number or weighted index number.
- Inadequate skilled labour to collect information
- Regional differences in prices of basic needs
- Lack of standard units for sale of the basic needs across the country
- Inadequate funds for the process of compilation of data for instance money for transport and stationery
- Individual income may change consumption patterns
- Wrong information from interviewee.
- Data collection is a tedious exercise
- Unstable taste and preferences of interviewees.
- Unrepresentative basket of goods due to different income groups

7(a) What is meant by the following

(i) Balance of trade

It is the difference in the values of country's exports and imports.

A country that imports more goods and services than it exports in terms of value has a trade deficit or a negative trade balance. Conversely, a country that exports more goods and services than it imports has a trade surplus or a positive trade balance.

(ii) Balance of payment

The balance of payments (BOP) is a statement of all transactions made between entities in one country and the rest of the world over a defined period of time.

The balance of payments (BOP) transactions consist of imports and exports of goods, services, and capital, as well as transfer payments, such as foreign aid and remittances

(b) Why may the use of devaluation polity to improve the balance of payments in an economy fail?

- When other countries affected by devaluation retaliate and nullify the effect.
- When the supply of export commodities in the devaluating country is inelastic, this lead to no increase in the quantity of goods demanded.

- The high marginal propensity to imported superior commodities leading to more foreign exchange expenditure
- Where there is heavy restriction on commodities from devaluating countries.
- When the devaluating country is experiencing inflation, the leads to low demand for them
- Where there is urgent need to import essential commodities such as petroleum products, machinery etc.
- When the devaluating country is not a major producer or supplier of export commodities in questions
- Lack of export promotion institutions/strategies by devaluating countries.
- Where devaluation may leads to smuggling.
- May lead to inferior cheaper substitutes in an economy.
- When there is corruption and inefficiency in implementation of devaluation policy
- Under conditions of full employment, devaluation fails to increase outputs in an economy

8(a) Distinguish between project planning and micro-planning

Project planning is a discipline addressing how to complete a project in a certain timeframe, usually with defined stages and designated resources. One view of project planning divides the activity into these steps: setting measurable objectives, identifying deliverables and scheduling.

Micro planning is a task management approach that breaks down projects into small, manageable steps. This can be an effective way to improve productivity and focus, as it allows you to break complex tasks into small, achievable goals.

(b) Account for the existence of centralized planning in developing countries.

- Focused and unified development vision
- Clear chains of command because everyone knows who to report to.
- Ease mobilization of development funds from donors and development partners
- Saves time through quick implementation of decisions since a few specialized people are involved in decision making
- Eliminate duplication of work leading to reduced costs
- Minimizing wastage of resources
- It coordinates sectoral development
- It helps in sequencing of operation as there close supervision
- It helps in equitable distribution of resources
- Saves money on skilled manpower
- It ensures protection of national interests that cannot be handled at local levels.
- It emphasizes proportionality and compatibility.

Thank you

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