CERTIFIED PUBLIC ACCOUNTANT

FOUNDATION LEVEL 2 EXAMINATIONS

F2.2: ECONOMICS AND THE BUSINESS ENVIRONMENT

DATE: THURSDAY 30, NOVEMBER 2023

MARKING GUIDE AND MODEL ANSWERS

QUESTION ONE

Marking guide

Criteria	Marks
a. Explanation of the expression 'ceteris paribus (Explanation and example,1 Mark each)	2
b. Factors limiting consumer sovereignty (0.5 mark for listing ,0.5 for explaining each)	6
c. (i) Identification of supply function (2 marks)	2
Value of equilibrium price and quantity (1 mark each)	2
Point elasticity of supply at equilibrium point (1 mark for formula, 1 mark for workings and 1 mark for answer)	3
d. Five roles of economic agents in a mixed economy (1 mark each correct answer)	5
Total	**20**

Model answers

a. Ceteris paribus is a Latin expression which means all other things remaining constant. It is an essential component of a scientific method. For example, once we wish to examine the effect of price on demand, we use this expression to assume that other factors which have influence on demand like income or taste are constant to prevent any effect they can cause on demand while studying the behavior of demand as the price varies.

For example, the higher the price the lower the quantity demanded and vice versa, ceteris paribus. This law of demand without ceteris paribus would not be correct because the increase in prices coincided by the increase in consumer's income tend to have no effect on demand.

b. Eight factors limiting consumers sovereignty

Consumer sovereignty refers to the willingness, ability and freedom of the consumer to largely influence the fundamental economic decisions of resource allocation. The consumer's willingness and ability to spend on goods and services is an indication to producers (firms) of what, how and for whom to produce through resource allocation and relocation.

The ability and freedom of the consumer to determine the fundamental resource allocation decisions is limited by the following factors:

1. **Nature of the economic system**: A consumer is more sovereign in a free market system where commodities are produced more in line with customer preferences. In a planned economic system, what to be produced is determined by the central planning authority.

2. **Size of the consumer's income**: The power to determine what is to be produced depends on the amount of income that an individual consumer earns. The consumers who earn more are able to influence what to be produced than lower income earners.

3. Range of goods available: Consumers depend on what is available in the market. They cannot therefore influence the production of something not available on the market through price bidding. Production may end up lagging behind consumers preferences.

4. Conventions of society (perception and norms): In some societies, people are driven by religion. In some societies, it is believed that trousers are not for women. This limits women's sovereignty in influencing the production of trousers irrespective of their desires.

5. Peer pressure/addiction/habit: The habit or addiction in taking some products like alcohol or cigarettes doesn't allow consumers to influence the demand since they look like the are permanently attached to those products and their demand for those products is always effective. In this case consumers have limited sovereignty.

6. Standardization of goods: This limits consumers sovereignty since firms produce since the standards are set by manufacturers.

7. Existence of monopolies: The existence of one supplier of a commodity without close substitutes limit consumers ability to determine the type, quantity, quality and price of items to be produced.

8. Government policy: The consumption of some products may be prohibited by the government irrespective of the level of demand for them. These products include harmful products like drugs, pornographic materials. In this case consumer sovereignty is limited.

9. Advertising and salesmanship: A powerful advertising by bigger companies pushes consumers to buy advertised products and this limit consumer's sovereignty since effective demand is diverted from some goods to others through the powerful influence of advertising.

c. (i) Point elasticity of supply at equilibrium point

Given the following function $Q_x=3p^2-4p$ $Q_y=24-P^2$ Where we need to identify which one is demand or supply. Let's substitute in the above equations the value of p=2 and p=3 to assess the behavior of the above functions in line with the law of demand and the law of supply.

Law of demand: It states that 'ceteris paribus', the higher the price, the lower the quantity demanded and vice versa.

Law of supply: It states "ceteris paribus", the higher the price,
the higher the quantity supplied and vice versa.

Price (P) in FRW	Quantity Q_x	Quantity Q_y
2	4	20
3	15	15

According to the above laws; $Q_x=3p^2-4p$: Supply function
$Q_y=24-P^2$: Demand function

At equilibrium, Qd=Qs Where Qd: quantity demanded Qs: quantity supplied

$3p^2-4p=24-P^2$ $3p^2-4p-24+P^2=0$ $4p^2-4p-24=0$

We can solve this quadratic equation as follows:

$\Delta = b^2-4ac$ $\Delta = (-4)^2-(4*4*-24)$ $\Delta=400$ $\sqrt{\Delta}=20$

$x_1=(-b+\sqrt{\Delta})/2a$ $=(-(-4)+20)/(2*4)$ $x_1=(4+20)/8$ $P_1=3$ $p_2=(-(-4)-20)/8$

x_2= -2 (ignore negative price)

By substitution in any of the above equation, we can get the value of equilibrium quantity as follow:

$Q_x=3(3)^2-4(3)$ $Q_x=15$ tickets $Q_y=24-P^2$ $Q_y=24-3^2$ $Q_y=15$ tickets

Point elasticity of supply is given by the following formula:

PES= $(\Delta Q/\Delta P)\times(P/Q)$ $\Delta Q/\Delta P=(3p^2-4p)'$ $\Delta Q/\Delta P=6P-4$ By substituting with p=3 we **get** $\Delta Q/\Delta P=6(3)-4$ $\Delta Q/\Delta P=14$ PES=14*(3/15) **PES=2.8****

d. **Five roles of economic agents in a mixed economy**

Mixed economic system combines elements of the market and command economy. Decisions are made by private individuals and firms, and some by the Government. Therefore, some resources are allocated through the forces of supply and demand and others by the state planning system.

Economic agents are the people or parties who determine the growth and flow of economic activities and this include producers, consumers and the government and they play the following roles:

(i) The government controls the economy such as through pollution, safety and employment regulation
(ii) The consumer determines what is to be supplied in the market and at what price
(iii) Producers determine the amount of goods produced in the economy as a result of the forces of demand and supply
(iv) The government controls public sector, which typically consists of public services such as health and education.
(v) Both the government and producers employ citizens and provides them with income to sustain them in the economy.

QUESTION TWO

Marking guide

Criteria	**Marks**
a. Six factors behind existence of monopoly (0.5 mark each for listing) and (0.5 mark each for explanation)	6
b. Three defects of unregulated market (For each(1 mark for listing ,1mark for explaining	6
c. Definition of price cartel (2 marks)	2
Factors influencing the success of price cartel (1.5 marks each)	6
Total	**20**

Model answers

a. Referring to the case study of latex mining company, this is a situation of monopoly, which is a market structure in which there is a single supplier selling a product which has no close substitute. Here Latex is a monopolist and controls the entire output.

Factors behind the existence of latex as a monopoly:

- **Control of an important factor of production**: It is probable that the quarry for which Latex was granted a license to mine gold in is the only gold quarry in Rwanda, this limits the entry of other manufacturers of similar products since they cannot get raw materials.

- **Legal restrictions**: It is also possible that the government restricted the entry of competitors in gold mining industry to protect the existing supplier. This can be done to motivate infant industries.

- **Size of the market:** The size of market of those buying luxurious golden commodities in Rwanda might be low so that it doesn't attract new firms.

- **Monopolies through economies of scale**: Latex might be enjoying an economy of scale given it is the miner of gold and the manufacturer of golden products so that new firms can be discouraged by producing at high average cost.

- **Use of restriction practices/Mergers:** Latex possibly exists as a result of formation of cartel by many independent suppliers to drive away competitors by manipulating the price the way they want.

- **High initial capacity:** Given the business of latex involves mining, it is probable that it requires a high starting cost which cannot be afforded by any supplier and this give the existing supplier the monopoly power.

b. **Defects of unregulated markets**

In very many cases, unregulated markets and the price system are effective and efficient ways of allocating resources but this does not mean that unregulated markets are always perfect. The existence of some defects is widely accepted and among the main problems are:

(i) **Inequalities of Income**

One of the merits of the unregulated market is that it makes the consumer sovereign and that resource allocation responds to demand pressures. However, if we imagine that consumers influence allocation by votes cast when they buy or refrain from buying goods and services, we have to admit that some consumers have more votes than others and large numbers have very few votes.

Markets respond quickly to those groups which have the most purchasing power. This does not always ensure that resources are allocated in ways that meet the social expectations of the community.

(ii) **Market Power of Some Large Suppliers**

Consumers may not always be powerful in markets dominated by large firms. If such firms become very powerful, they can influence both supply and demand through controlling the goods allowed into the market and by heavy advertising. Governments of most large market-economy nations are often accused of failing to take action to check the sale of tobacco and alcohol - both of which are potentially dangerous to health and society - because of the power of the tobacco and alcohol producing companies.

(iii) **Deficiencies in the Supply of Public Goods**

The market economy operates on the principle of self-interest. Consumers wish to maximise their own utility; producers their profit. In most cases this works to the public benefit but not always. If it is in no one's interest to provide a community or public good, it will not be provided without the intervention of the government.

Public sewers, public roads and transport, police and social services, even fire services, fall into this class. The community clearly needs adequate services but left to the market only the wealthy would attempt to purchase their own, and the community as a whole would be subject to the risk of contagious diseases, unchecked crime and fires.

(iv) Prices may not fully reflect the cost or benefits of certain goods or services especially costs to the environment. Public goods are underinvested and firms produce in a way that environmental effects will be beared by the future generation.

(v) Firms in unregulated markets are not compelled to inform the public about how they conduct their activities. Without government intervention firms may commit fraud at consumers risk.

c. **Explanation of a price cartel**

A price cartel is a group of firms that join together and fix a common price at which they sell their goods and services in the market. The aim of a price cartel is to join together and increase the market power and members work together to determine jointly the level of price that each member will charge.

Factors influencing the success of a price cartel:

- Existence of fewer firms in the industry
- Identical costs and demand for the firms
- Knowledge of the set monopoly price and being guided by it in charging customers
- Correct knowledge of the market demand and of the costs of all firms
- Recognizing the interdepence of a firm with others in the industry
- Inelastic demand of the product being traded
- Strong barriers to market entry
- Low organizational costs

QUESTION THREE

Marking guide

Criteria		Marks
a.	For each Negative and positive externality allocate 1 mark	8
b.	Reasons why small firms survive alongside large firms (1 mark for explaining each)	8
c.	(i)The average revenue function (1 mark for correct workings,1 mark for answer)	2
	(ii)The total Revenue function (1 mark for correct workings,1 mark for answer)	2
Total		**20**

Model answers

a. Externalities arise whenever the actions of an economic agent make another economic agent worse or better off, yet the first agent neither bears the costs not receiving the benefits of doing so. In summary externality occurs when producing a product cause an impact on third parties not directly related to the production. Externalities are either positive or negative.

Positive externalities of nguvu Cement:

1. Nguvu cement is likely to construct or participate to the construction of access road and this will benefit the factory and surrounding population who are not directly involved to Nguvu's activities and nothing they will pay to Nguvu for using this feeder road.

2. The factory will probably lighten the road to the factory and this will be of interests to all surrounding people who uses this road but who have no direct contribution in lighting.

3. Water access to the factory will also benefit the neighboring community by connecting to the main water pipe heading to the factory.

4. Nguvu is likely to dump some waste in the public river and this limit people's access to clean water for irrigation.

5. Nguvu will probably build a canteen at the factory that will benefit both employees and surrounding population.

6. Nguvu may set up some recreation facilities like playgrounds near the factory and make them open for all.

Negative externalities of Nguvu Cement ltd.

1. All Nguvu’s trucks carying raw materials are likely to participate to the air pollution through engine’s gas emission

2. Factory machines are like to make noise during their working hours and this will be a harm to the surrounding population.

3. The destruction of public roads is likely since trucks carrying raw materials will be using surrounding roads many times.

4. During the exploitation of clinker, there is a probability that people’s houses will be affected by explosions.

5. Traffic congestion is likely in roads surrounding the factory as too many trucks of Nguvu will be using the roads and this is likely to motivate accidents and delays.

b. **Reasons why small firms survive alongside the large firms**

1. Small firms do not need to advertise extensively as large firms and hence incur less costs
2. Small firms are encouraged where production doesn’t require heavy machineries
3. Small firms have advantage where the production requires uniqueness
4. Small firms are easy to manage. This leads to efficiency and reduced cost of production
5. Small firms survive where demand has a changing character
6. Sometimes small firms are located in areas difficult to reach by bigger firms giving the power to monopolize that region.
7. Small firms do not face the problem of internal diseconomies of scale
8. Some small firms use by-products of large firms so that they cannot compete with each other
9. Owners of small firms can easily develop personal contacts with customers and give credit facilities making them to maintain the market.
10. Small firms sell to customers appropriate small quantities while bigger firms tend to sell in bulk.
11. Some activities do not require large firms like shoe shinning, hair saloon
12. Where the market is small, it necessitates the setting up of a small firm

c. (i)**The average revenue function**

Q+5P=10 5P=10-Q P=(10-Q)/5 AR=TR/Q remember AR=P P:Price Q:quantity
AR=2-0.2Q

(ii)**The total Revenue function**

TR=P*Q TR=((10-Q)/5) *Q TR=$(10Q-Q^2)/5$ TR=$2Q-0.2Q^2$

QUESTION FOUR

Marking Guide

a)	Governments reasons (2 marks each x 4= 8 Marks)	8
b)	Advantages (1 Mark each advantage x 3= 3 Marks)	3
Disadvantages (1 Mark each disadvantages x 3= 3Marks)		3
c)	Economic integration (2 Marks for definition+ 1 Mark each obstacle x 4= 6 Marks)	6
Total		**20**

Model Answers

a. **Reason why Governments across the world try to shield their industries from international competition**

Protectionist measures are usually aimed at:

- **Nationalism:** Nationalistic feeling or patriotism requires that people of a country should buy products of their domestic industries rather that foreign products
- **Employment argument:** Leading to increase in domestic employment or at least preserves present that foreign products
- **Infant industries argument:** Infant industries should be provided protection from the competition
- **Anti-dumping Argument:** Foreign producers compete unfairly by dumping the goods in another country. Dumping is a form of price discrimination when producers of a country sell goods in another country at lower prices than those charged at home
- **Maintaining Balance of Trade or trade surplus:** If a country exports more than it imports, it has a trade surplus. This means that more currency is flowing into your country than flowing out and this currency can pay domestic wages and fuel business expansion
- **Restricting imports:** Helps in developing industries can add to the country's economy growth, increase the overall wealth of the country and lead to a better balance of trade
- **Redistribution of income:** by providing protection to domestic producers, their profits can be raised at the expense of consumers who suffer a loss in consumer surplus as

protection denies them consumption of low-priced imported goods. That is protection redistributes income in favor of domestic procedures

b. **Advantages and disadvantages of international trade** `

(i) Advantages of international trade

- **Optimal use of natural resources**
  international trade helps each country to make optimum use of its natural resources. Each country can concentrate on production of those goods for which its resources are best suited and wastage of resources is avoided.
- **Availability of all types of goods**

It enables a country to obtain goods which it cannot produce or which it is not producing due to high costs by importing from other countries at lower costs.

- **Specialization**
  Foreign trade leads to specialization and encourages production of different goods in different countries. Goods can be produced at a comparatively low cost due to advantages of division of labor
- **Large scale production**

Due international trade, goods are produced not only for home consumption but for export to other countries also. Companies that are involved in exporting can achieve levels of growth that may not be possible if they only focus on their domestic markets.

This allows brands and businesses an opportunity to achieve sustained revenues from a diversified portfolio of customers in several markets instead of a limited customer base in a single home market. Nations of the world can dispose of goods which they have in surplus in the international market. This leads to production at large scale and the advantages of large-scale production can be obtained by all the countries of the world

- **Stability in prices**

International trade irons out wild fluctuations in prices. It equalizes the prices of goods throughout the world (ignoring cost of transportation, etc)

- **International trade encourages market competitiveness.**
  When a brand and business compete in several markets simultaneously, then it must focus on its competitiveness for it to be able to thrive. By observing a larger range of trends because of their greater level of global market access, brands and businesses can focus on quality, design, and product development improvements so that they can continuously improve and diversify.
- It can be used as a way to get around high levels of domestic competition.
  A domestic market can have several products or services that are like what a new brand and business is trying to offer. Instead of competing for a small sliver of that domestic market, going through international trade can help an organization target similar foreign markets where competition may be much lower. Over time, the experiences gained in the foreign market can help an organization be able to establish a stronger domestic presence as well.
- Revenue streams have some protection.
  Although all risk cannot be eliminated from international trade, a series of contracts, insurance, and financial instrument trading can help to protect the revenue streams a brand and business is able to develop.

(ii) **Disadvantages of international trade**

- **Economic dependence**

  The underdeveloped countries have to depend upon the developed ones for their economic development. Such reliance often leads to economic exploitation. For instance, most of the underdeveloped countries in Africa and Asia have been exploited by European countries
- **Mis– utilization of natural resources**

  Excessive exports may exhaust the natural resources of a country in a shorter span of time than it would have been observed. This will cause economic downfall of the country in the long run

- **Political dependence**

  International trade often encourages subjugation and slavery. It impairs economic independence which endangers political dependence. For example, the Britishers came to India as trades and ultimately ruled over India for a very long time.
- **International trade also presents cultural complications**

  Different cultures have different attitudes, standards, and expectations that can create problems for a brand and business. Failing to consider the expectation a different culture may have can lead to mistakes that damage the reputation of the brand and can be very costly to the bottom line. Any step of the sales process could create an offense. Something as simple as inappropriate packaging can be enough to permanently damage a brand's reputation

- **Danger to international peace**

  International trade gives an opportunity to foreign agents to settle down in the country which ultimately endangers its internal peace.
- **International trade increases the risk of proprietary information theft.**

  Going into an international market with a product or service increases the risk of another brand or business stealing proprietary information, marketing concepts, or even a personal identity. China has a reputation for doing this, even if there isn't a business presence in the local market.
- It has a credit risk that must be specifically managed.

  Many brands and businesses tend to overlook the risk of non-payment when they begin to operate in the world of international trade. Credit risks can be managed by obtaining insurance or a letter of credit, but customer finances and credit can still impact the number of potential sales that can be received within a market.

c. **Definition and the key obstacles of economic integration**

Economic integration is an arrangement among nations that typically includes the reduction or elimination of trade barriers and the coordination of monetary and fiscal policies. Economic integration aims to reduces costs for both consumers and producers and to increase trade between the countries involved in the agreement. Economic integration is sometimes referred to as regional integration as it often occurs among neighboring nations.

Below are the main obstacles affecting economic integration in the region:

- Countries produce similar products and hence have little to export to each other
- Uneven distribution and sharing of the benefits of economic integration
- Changes in regimes affect policy and commitment to economic integration
- Different political, social and cultural systems
- Different economic systems
- Lack of information
- Fear of loss of revenue from tariff

QUESTION FIVE

Marking guide

Criteria	Marks
a. Four factors that limit the application of multiplier in an economy (1mark each)	4
b. (i) Average propensity to save and average propensity to consume (1.5 marks for each of the two formulae,0.5 marks for each correct figure)	6
(ii) Underemployment equilibrium (2 marks for definition, 4 marks for a graph and 4 Marks for interpretation)	10
Total	**20**

Model answers

a. **Four factors that limit the application of multiplier in an economy**

Through the concept of multiplier, Keynes demonstrated that relatively small changes in spending can bring about relatively large changes in income. The following factors limit the application of multiplier in an economy.

- Leakage from the circular flow of income which reduce the value of multiplier
- The multiplier depends on the level of consumption, therefore, if the consumption is unpredictable, the multiplier also become unpredictable (effect on national income)
- Benefits of multiplier may not be felt immediately due to the possibility of long periods of adjustments
- In an economy where there is full employment, an increase in demand will be inflationary hence the multiplier effect will be eliminated

b. (i) Average propensity to save (APS) and average propensity to consume

APC=C/Y APS=S/Y

Using the data given, the APC and APS are calculated as below.

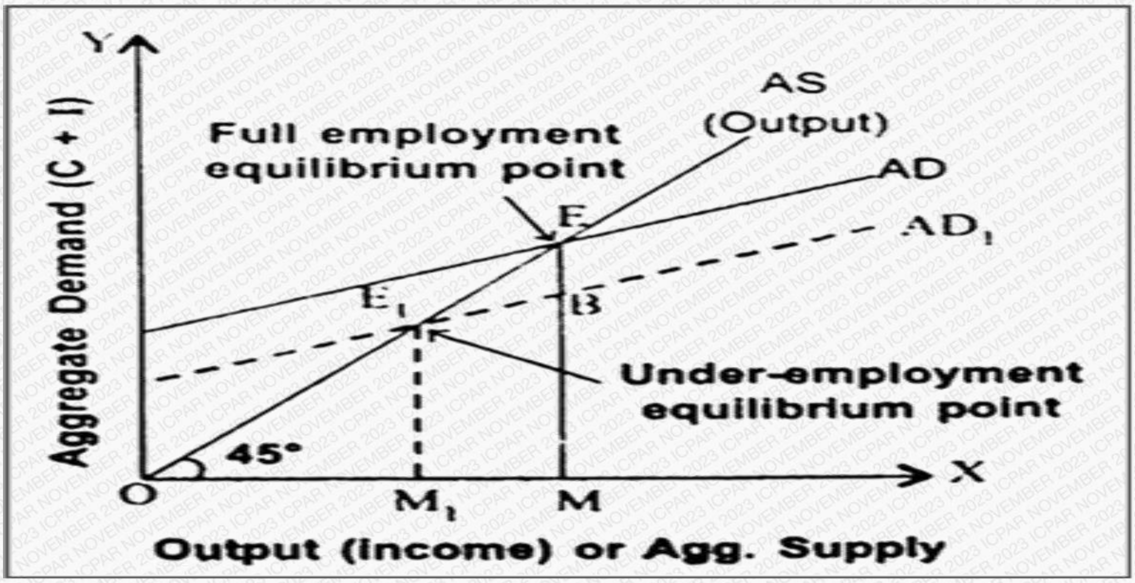
In 2022 APC=220/300 APC=0.73 APS=80/300 APC=0.266

Year	Income (Y)	Consumption(C)	APC	Saving (S)	APS
2020	100	100	1.00	0	0
2021	200	160	0.80	40	0.20
2022	300	220	0.73	80	0.27

(ii). Underemployment equilibrium

Unemployment equilibrium refers to a situation when equilibrium is attained (when aggregate demand is equal to aggregate supply below full employment level or when resources are not fully employed).

According to Keynes, It was possible for the economy to be inequilibrium but with high levels of unemployment (an underemployment equilibrium). This situation is illustrated in figure below. On the other hand, full employment equilibrium is attained when all resources in the economy are fully employed(utilized).



From the above graph, under employment equilibrium exists at E_2 while E_2 represents full employment equilibrium. Where aggregate supply exceeds aggregate demand like between E1 and E_2, it represents a deflationary gad that can be overcome by increasing aggregate demand.

QUESTION SIX

Marking guide

Criteria	Marks
a. Five factors determing the supply of a factor of production (2marks for each)	10
b. Determination of equilibrium price of labour (2.5 marks for graph,1 mark for interpretation and 1.5 marks for explanation)	5
c. Definition of economic welfare	1
Objections to the perfect competition market to favour economic welfare (1 mark each)	4
Total	**20**

Model answers

(a) Factors determining the supply of a factor of production

Factors that determine supply of a factor of production:

1. Price of a factor of production

The higher the price of a factor of production, the higher the supply of that factor and when the price is low, the supply will also tend to be low.

2. Level of education

The higher the level of education, the higher the supply of skilled labour. The supply of skilled labour in developing countries is low because of low education standards

3. Mobility of a factor of production

A factor of production that is mobile is likely to have a high supply

4. Government policy of taxation and subsidies

Subsidies and lower taxation increase production and supply of a factor of production accordingly.

5. Size of population

If the population size is high, there will be a higher supply of labour

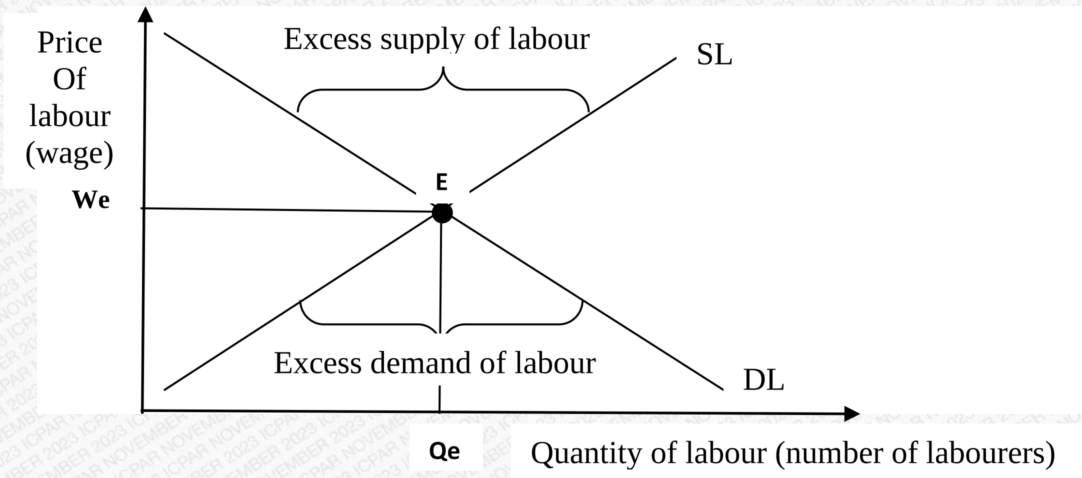
6. Demand of the output of the factor of production

If the product produced by a given factor of production has a high demand in the market, This will increase its production, making the supply of that factor of production increase since the factor is needed to produce more.

7. Time

Supply of a factor of production is low in the short run while in the long run supply of factor of production is high because it takes time to adjust mechanisms of increasing the supply of any item

(b) Equilibrium price of labour refers to the prevailing price of labour in the market as determined by forces of demand and supply. The supply forces and demand forces of a factor of production interact in a free market to determine the equilibrium price of a factor of production.



From the above graph, E represents equilibrium where We stands for equilibrium wage and Qe the equilibrium quantity of labour. When wage is increased above, We, there will be excess supply.

(c) Economic welfare refers to economic wellbeing expressed in terms of consumer surplus and producer surplus. By 'economic welfare' we mean the use of scarce resources to bring the greatest benefit to the largest possible number of people in the community. Welfare is said to be maximised when resources are used and production distributed in such a way that it is impossible to make one person better off without making another person worse off.

In traditional microeconomics perfect competition has often been favoured on the grounds that in the so-called long run equilibrium for the firm under perfect competition Abnormal profit is eliminated, Price is equal to marginal cost and Firms are obliged to produce at quantity levels where average costs are at their lowest.

Four objections to the perfect competition as a market that favors economic welfare

a. Long-run equilibrium can only be achieved if demand remains constant over a reasonably long period. If demand fluctuates, as it frequently does in competitive markets, the market is extremely unstable. Firms face constantly fluctuating prices and have to plan production under conditions of considerable uncertainty. This leads to instability in factor (including labour) prices.

b. Market instability and low profit levels make it difficult to undertake technical research.

c. Consequently, firms tend to remain small and the level of technology low. Although firms may be forced to minimize production costs these may be at levels significantly higher than could be achieved if they were able to gain economies of large-scale production and develop more advanced production technology. Resources are not, therefore, used to their maximum potential efficiency.

d. Goods that are homogeneous offer no choice to consumers and choice is an element in consumer utility.

QUESTION SEVEN

Marking guide

Criteria	Marks
a. Five functions of taxation (1 mark for each)	5
Qualities of a good tax system (1 mark each)	5
b. Determination of interest rate (2.5 marks for graph, 2.5 marks for interpretation)	5
c. Five functions of the central bank (1 mark each)	5
Total	**20**

Model answers

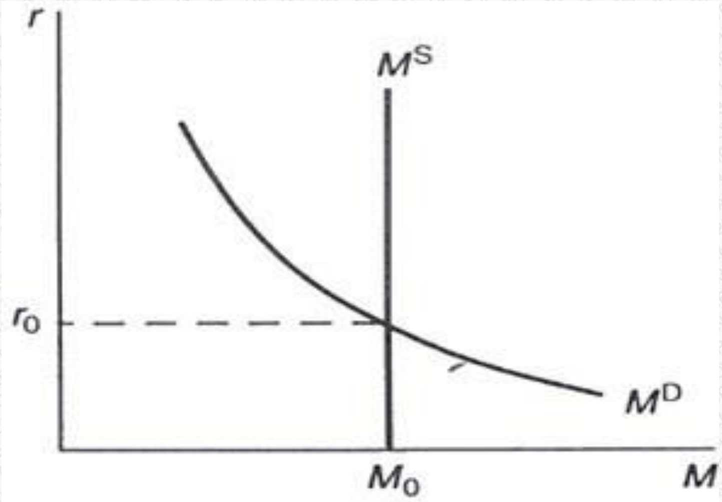
(a) Functions of Taxation:

- To raise revenue – to pay for goods and services and for the upkeep for government administration
- To discourage bad habits – e.g. tax on cigarettes, alcohol.
- To make private firms/people pay for externalities – e.g. pollution.
- To redistribute wealth – tax the better off and pay for social welfare and old age pensions.
- To protect domestic industries from foreign competition – import taxes and export subsidies (reverse taxes).
- To stabilize National income – taxation reduces the effect of the multiplier so it dampens swings in the trade cycle.
- To target particular sections of the economy – e.g. taxes on wealth, capital, income, goods can be used with relative precision to affect specific sectors.

Qualities of a Good Tax System

- Based on the system ability to pay.
- The tax should be certain and understood by all.
- Payment should be related to how and when people receive and spend their income (e.g. PAYE deducted when wages are paid, VAT is charged when goods are bought).
- Cost of collection should be small relative to its yield.
- Should be easily adjustable. E.g. the rates
- Should not harm initiative
- Evasion should be difficult.
- It should be fair

(b) It can be assumed that the money supply in the economy is determined by the Bank's monetary policy. This can be illustrated by a vertical supply of money at whatever quantity the Bank decides. The figure below brings the supply and demand for money together.



The equilibrium rate of interest will be determined at the point of intersection of the money supply and money demand curves. If the bank decides on a money supply of Mo and if the demand for money in the economy is as represented by MD, then the equilibrium rate of interest in the economy is ro.

(c). **The following functions are performed by a Central Bank**

1.**Sole issuer of legal tender;**

2**. Banker to the government** – the government keeps its accounts at the Bank;

3. **Supervision of financial system** – maintain public confidence in the system by ensuring that banks behave prudently;

4.**Lender of last resort** – if banks are incapable of meeting their liabilities due to a temporary shortage of liquidity, the Bank is usually willing to lend money to banks and, thereby, underwritepublic confidence in the financial system. (Note, this function gives rise to a moral hazarddilemma. If the Bank is always prepared to bail out the banks, then they will have less incentiveto behave prudently);

4. **Borrows money on behalf of government** – issues short term and longer-term government securities. (This in turn gives rise to a need to manage the national debt. The Bank may or maynot be responsible for managing the national debt);

5.**Instrument of government monetary policy** – controls the amount of money in the economy, the level of interest rates and the exchange rate of the currency

END OF MARKING GUIDE AND MODEL ANSWERS