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CERTIFIED PUBLIC ACCOUNTANT

FOUNDATION LEVEL EXAMINATIONS

F2.2: ECONOMICS AND THE BUSINESS ENVIRONMENT

DATE: THURSDAY 29, AUGUST 2024

MARKING GUIDE & MODEL ANSWERS

QUESTION ONE

Marking Guide

Question	Sub question	Description	Marks
1	(a)	**Explain any FOUR functions of money and explain how inflation prevents money from performing those functions properly**	
		Award 1 Mark for well explained function of money. Max 4 Marks	4
		Award 1 Mark for well explained point of how inflation affect functions of money. Max 4 Marks	4
	(b)	**Briefly discuss any THREE tools of monetary policy which can be used by the central bank**	
		Award 2 Marks for a well explained tool of monetary policy. 1 Mark for stating the tool and 1 Mark for explanation. Max 6 Marks	6
	(c)	**Using examples, briefly explain the THREE motives of holding cash as advanced by Keynes.**	
		Award 2 Marks for a well explained motive of holding cash. 1 Mark for stating the motive and 1 Mark for explanation. Max 6 Marks	6
		Total	**20**

Model Answer

a) **Explain any FOUR functions of money and explain how inflation prevents money from performing those functions properly**.

Money is usually defined by reference to the following principal functions it performs:

- **A medium of exchange (exchange function):** Money is used as payment for goods and services. Its existence separates the activities of buying and selling and thereby removes the need for a double-coincidence of wants when trading.
- **A store of value (asset function):** To be acceptable as a medium of exchange, money must act as a store of value. Money must be a means of storing purchasing power.
- **A unit of account:** To act as a medium of exchange, money must also act as a unit of account. It must be possible to measure the value of goods and services in terms of money. Without money, national income accounting would be practically impossible.
- **A standard of deferred payments:** By acting as a unit of account over time, money facilitates the generalized use of credit in modern economies.

These functions of money are fundamental to the functioning of modern economies, providing the basis for economic transactions, wealth accumulation, and overall economic stability.

Inflation prevents money from performing its functions properly in the following ways:

- **Means of exchange:** When inflation is very high (hyperinflation) people no longer want to use money.

- **Unit of account:** When there is inflation money is no longer a stable unit of account because the prices of different products rise by different percentages so relative price and values change
- **Standard for Deferred Payment**: In a period of inflation debtors gain at the expense of creditors which is an unfair/arbitrary change, this makes people/banks reluctant to lend and increases the interest rate and it can lead long-term contracts hard to negotiate.
- **Store of Wealth:** Inflation erodes the "real" value of money and leads to people holding their wealth in other asset e.g. property, art.

b) **Briefly discuss any THREE tools of monetary policy which can be used by the central bank**

A central bank is an institution typically responsible for managing a country's currency, money supply, and interest rates. It is often the sole issuer of currency, acts as a banker to the government and commercial banks, and oversees the financial system to ensure stability and economic growth. Central banks also play a crucial role in regulating and supervising financial institutions to maintain the overall stability of the financial system and economy

The following are some of the tools of monetary policy:

- **Controlling the Reserve Asset Ratio (Reserve requirement):** Central banks set the minimum amount of reserves that banks must hold against their deposits. By changing reserve requirements, central banks can influence the amount of money banks can lend out. If the central bank wants to restrict the capacity of the banks to create deposits, it could insist on a high minimum reserve asset ratio. The higher the reserve requirement, the smaller is the credit multiplier.
- **Open Market Operations (OMO):** Central banks buy and sell government securities (bonds) on the open market to adjust the money supply. Buying bonds injects money into the economy, while selling bonds withdraws money.
- **Interest Rates:** Central banks can adjust the interest rates at which they lend to commercial banks. Changes in these rates affect borrowing costs throughout the economy, influencing spending and investment decisions.
- **Forward Guidance:** Central banks can communicate their future policy intentions to influence expectations and market behavior. For example, indicating a commitment to keeping interest rates low for an extended period can affect long-term borrowing decisions.
- **Quantitative Easing (QE):** In times of economic crisis, central banks may undertake large-scale purchases of financial assets (like government bonds or mortgage-backed securities) to increase the money supply and lower long-term interest rates.

- **Discount Window Lending:** The discount window allows banks to borrow short-term funds from the central bank at the discount rate.

  Impact: By adjusting the discount rate, the central bank influences the cost of borrowing for banks. Lower rates encourage banks to borrow and lend more, while higher rates discourage borrowing and lending.

c) Using examples, briefly explain the THREE motives of holding cash as advanced by Keynes.

In his "General Theory of employment, interest and Money" In 1936, Keynes advanced the following three motives of holding cash:

- **The transactions motive:** People will tend to hold cash to meet ongoing day to day expenditures. As the level of expenditure of an individual will be positively linked to the level of income, it is reasonable to assume that the desired level of cash balances for transactions purposes will be positively linked to the level of income
- **The precautionary motive:** This motive for holding cash balances stems from the unpredictability of some transactions. People will hold cash balances just in case a need arises. motive stems from the desire to avoid capital losses. Cash is held as a precautionary measure to meet unexpected expenses or emergencies. Having readily available cash ensures that individuals and organizations can handle unforeseen financial needs without relying on borrowing or selling assets at unfavorable times.
- **The speculative motive:** Cash can be held as a speculative motive when individuals or entities anticipate future investment opportunities. Holding cash allows them to quickly take advantage of favorable market conditions, such as purchasing assets when prices are low or investing in new ventures.

QUESTION TWO

<u>Marking Guide</u>

Question	**Sub question**	**Description**	**Marks**
2	**(a)**	**After differentiating the income from cross elasticity of demand, state FOUR arguments for the concept of elasticity of demand**	
		Award 1 Mark for each well explained definitions of income and cross elasticity. Max 2 Marks	2
		Award 1 Mark for well stated argument for the concept of elasticity of demand. Max 4 Marks	4
	(b)	**After differentiating minimum from maximum price controls, explain any THREE reasons why government and other agencies should ever wish to intervene in price controls**	
		Award 1 Mark for each well explained definitions of minimum and maximum price control. Max 2 Marks	2
		Award 2 Marks for each well explained reason why government intervene in price controls. Max 6 Marks	6
	(c)	**Using examples, support this statement *'The unregulated markets are not always perfect*",**	

		Award 2 Marks for a well explained problems of unregulated market. 1 Mark for stating the motive and 1 Mark for explanation. Max 6 Marks	6
		Total	**20**

Model Answer

a) After differentiating the income from cross elasticity of demand, state FOUR arguments for the concept of elasticity of demand

Income elasticity of demand: This relates to proportional change in quantity demanded to the proportional change in disposable income of customers for the product. It can be denoted by **Ey**, so that $Ey = \frac{\text{proportional change in quantity demanded of X}}{\text{proportional change in disposable income}}$

While, Cross elasticity of demand relates the proportional change in demand of one product to the proportional change in price of another..$Ex = \frac{\text{proportional change in quantity demanded of X}}{\text{proportional change in quantity demanded of Y}}$

If two products are substitutes for each other, we can expect a rise in price of one to lead to a rise in demand for the other and Ex will carry a positive sign. If, however, the two products are linked together, e.g. petrol and motor-car tyres, then a rise in price in one lead to a fall in demand for the other, and Ex carries the negative sign

FOUR arguments for the concept of elasticity of demand

- Buyers spend limited income on commodities with less elastic demand.
- In Business it's important to know how changes in price affect sales revenue e.g. if a product has inelastic demand, then increasing its price will not affect its quantity demanded and this will increase revenue
- The concept of elasticity is useful in devaluation policy aimed at improving the balance of payments.
- It's important to the government when setting price control measures
- Knowledge of cross elasticity is necessary when the government wants to impose a tariff on an imported commodity to protect a domestic industry.
- Firms need to know the cross elasticity of their products and substitute products when contemplating price rises.
- Firms also need to know the cross elasticity of the products and complements to plan their production.
- Elasticity analysis helps in evaluating the effects of economic changes, such as shifts in income levels or global prices, on different market segments. This is crucial for assessing the broader impact on the economy. Example: A rise in income might affect luxury goods differently compared to essential goods, guiding targeted economic interventions.

b) After differentiating minimum from maximum price controls, explain the reasons why government and other agencies should ever wish to intervene in price controls

Minimum price controls, also known as price floors, set a legally established minimum price at which a good or service can be sold. This means that prices cannot legally fall below this set floor. The minimum price usually is set above the market price. Example: Rent controls that cap the amount landlords can charge for rent.

Maximum price controls, also known as price ceilings, set a legally established maximum price at which a good or service can be sold. This means that prices cannot legally exceed this set ceiling. The maximum price is usually set below the market price. Example: Price ceilings on essential medicines during a health crisis to prevent exorbitant prices.

Three reasons why government and other agencies should ever wish to intervene in price controls

- **Social Unacceptability**: If the price resulting from an unregulated market were considered to be socially unacceptable, as causing hardship or conflict in the community, attempts might be made to control it. This could happen in a period of food shortage caused by war and/or climatic disaster, and also if there were a shortage of housing in urban areas sufficient to cause hardship and increase risks of disease, crime and other social evils.
- **Incomes of Producers:** Attempts might be made to maintain high prices if it were desired to raise the income of producers and their employees. This is one of the motives of the European Union's Common Agricultural Policy (CAP).
- **Stability of Supply**: Some markets are notoriously unstable because of unplanned variations in supply, caused by weather and other circumstances beyond the control of producers. In these cases, attempts may be made to control prices to ensure greater stability in the market.
- **Protecting Consumers:** To ensure that essential goods and services remain affordable for the general public, especially during times of crisis or inflation. Example: Price ceilings on essential medicines during a health crisis to prevent exorbitant prices.

c) Using examples, support this statement '*'The unregulated markets are not always perfect*".

Unregulated markets are those markets with no or with minimal interventions of the government or any other regulatory agency.

The following are some problems which may arise because of unregulated market:

- **Inequalities of Income:** One of the virtues claimed for the unregulated market is that it makes the consumer sovereign. Markets respond quickly to those groups which have the most purchasing power. 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.

- **Market power of some large suppliers**: Consumers may not always be as powerful as introductory economic theory suggests. If some firms become very powerful, they can influence both supply and demand through controlling the goods allowed into the market and by heavy advertising
- **Deficiencies in the supply of public goods**: The market economy operates on the principle of self-interest. Consumers wish to maximize 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 political machinery of the State

QUESTION THREE

Marking Guide

Question	Sub question	Description	Marks
	(a)	**Briefly discuss FIVE the argument for business growth by a means of mergers**	
		Award 1 Mark for each well explained argument for mergers. Max 5 Marks	5
	(b)	**Discuss the SIX diversification strategies that ABC_XYZ Ltd would go for**	
3		Award 1 Mark for each well explained diversification strategies. Max 6 Marks	6
	(c)	**After briefly discussing the THREE degrees of price discrimination, explain the necessary conditions for companies like ABC_XYZ Ltd to operate the price discrimination**	
		Award 2 Marks for a well explained degree of price discrimination. 1 Mark for stating the degree and 1 Mark for explanation. Max 6 Marks	6
		Award 1 Mark for a well discussed condition for a company to apply price discrimination. Max 3 Marks	3
		Total	**20**

Model Answer

a) Briefly discuss FIVE the argument for business growth by a means of mergers
The motives of mergers include some of the following;

- It allows the company to enter new product or/and market areas especially where the process of internal development is slow. This is especially true in many e- commerce businesses
- The competitive situation may influence a company to adopt a merger strategy compared to being a new company entering the market. Competitive reaction is reduced if the former strategy is adopted
- De-regulation is a driving force for many mergers which reduces the fragmentation of the market

- Financial motives that enhance opportunities are also a factor: Mergers and acquisitions helps merged companies to enjoy the economies of scale
- A lack of resources or competencies to compete successfully may be acquired that will offer better economies of scale or economies of scope.
- Economies of Scale: Mergers can help companies achieve economies of scale by increasing their production capacity. This often results in reduced per-unit costs as fixed costs are spread over a larger volume of output. Example: A merger between two manufacturing companies can lower costs per unit by sharing production facilities and resources, leading to more competitive pricing.
- Increased Market Share: Merging with or acquiring a competitor can significantly increase a company's market share. This can enhance market power and competitive positioning. If a leading retail chain merges with a smaller competitor, it can dominate a larger portion of the market, leading to increased customer reach and influence over pricing.

- Synergies and Resource Sharing: Mergers often create synergies where combined resources, technologies, or expertise lead to enhanced operational efficiencies and innovation. Example: A technology firm merging with a research company can combine resources to accelerate product development and innovation.

- Financial Strength and Risk Diversification: Mergers can enhance financial strength by pooling assets and resources. This can also help in spreading business risks across a larger and more diverse operation. Example: A smaller company facing financial difficulties might merge with a larger, financially stable company to benefit from its stronger balance sheet and reduce financial risk.

b) Discuss the SIX diversification strategies that ABC_XYZ Ltd would go for
The following are some of the diversification strategies that ABC_XYZ Ltd would go for:

- **Strategies for entering new industries**: acquisition, start-up and joint venture
- **Related diversification strategies**: This involves investing in a related companies (vertical or horizontal mergers)
- **Unrelated diversification strategies**: This involves investing in a unrelated companies. This is where for example a company in mining sector invest in manufacturing or service sector
- **Divestiture and liquidation strategies**: If a company is considered for divestiture, it would suggest that it no longer fits or is an attractive investment
- **Corporate turnaround, retrenchment and restructuring strategies:** Those are the strategies whereby a company may use either demerger, spinoff (converting divisions into different companies)
- **Multinational diversification strategies:** an example of this is where a multinational company can benefit from its competitive advantage by transferring its expertise in a core technology to other lines of business able to benefit from its capabilities e.g. Honda – from piston rings to motorcycles to cars, hedge trimmers etc.

c) After briefly discussing the THREE degrees of price discrimination, explain the necessary conditions for companies like ABC_XYZ Ltd to operate the price discrimination?

Price discrimination refers to selling the same or slightly differentiated products to different sections of consumers at different prices. Consumers are discriminated on the basis of their income or purchasing power, geographical location, age, sex, color, marital status etc..

Price discrimination has the following three forms:

First Degree price discrimination: When a seller is able to know the price each consumer or consumer group is willing to pay, he sets the price at its highest level where those willing to buy the commodity buy at least one unit. After extracting the consumer surplus of this section of consumers for the first one unit of the commodity, the seller gradually lowers the price so that the consumer surplus for the second unit is extracted. The seller continues this process until the whole consumer's surplus available at a price where MC=MR is extracted.

Second Degree price discrimination: Where the market size is very large, a monopolist adopts the block pricing method by dividing potential buyers into blocks e.g., rich, middle class and poor then sells he commodity in blocks, first at the highest price to the rich, then at a lower price to the middle class and then a lower price to the poor. This can be done in the case of utility services such as telephones, water etc.

Third Degree price discrimination: A profit maximizing monopolist sets different prices for different markets having demand curves with different elasticities. The firm segments the market for a particular good or service into easily identifiable groups and then charges each group a different price

The following are the necessary conditions for companies like ABC_XYZ Ltd to operate the price discrimination

- For a company to discriminate prices, different markets must be separable so that buyers in one market are not in a position to resell the commodity in the other markets. Markets are separated by geographical distance involving high cost of transportation or lack of distribution channels.
- For a company to discriminate prices, the elasticity of demand must be different in different markets.
- The firm must have monopoly over the supply of the product to be able to discriminate between different class of consumers and charge different prices.
- The company must be able to divide the market into distinct segments where different price sensitivities exist. These segments should be identifiable and separable. Example: A cinema can segment its market by offering different prices for adults, children, and seniors.
- The company must ensure that customers who buy at a lower price cannot resell to those who would be charged a higher price. This prevents the leakage of lower-priced goods to higher-paying consumers. Example: Airlines prevent passengers from buying discount tickets and reselling them at higher prices by enforcing strict ticketing rules and requiring ID verification.

QUESTION FOUR

Marking Guide

Question	Sub question	Description	Marks
4	(a)	**Briefly discuss the three exchange rate regimes**	
		Award 2 Mark for each well explained definitions of exchange rate regime. Award 1 Mark for stating and 1 Mark for explanation. Max 6 Marks	6
	(b)	**Using graphs, differentiate trade creation and trade diversion as effects of custom union**	
		Award 2 Mark for each well explained definitions of trade creation and trade diversion. Max 2 Marks	2
		Award 2 Marks for each well explained graph. 1 Mark for drawing and 1 Mark for interpretation. Max 4 Marks	4
	(c)	**Calculate and comment on term of trade (TOT)**	
		Award 2 Marks for calculation of TOT. 1 Mark for formula and 1 Mark for calculation	2
		Award 2 Marks for a well-articulated comment on the Terms of trade	2
	(d)	**Discuss Heckscher and Ohlin theory on the international trade**	
		Award 4 Marks for a well explained theory of Heckscher and Ohlin theory on the international trade	4
		Total	**20**

Model Answer

a) Briefly discuss the three exchange rate regimes

Three alternative policies (or exchange rate regimes) are typically available:

1. Free floating
2. Fixed
3. Managed float

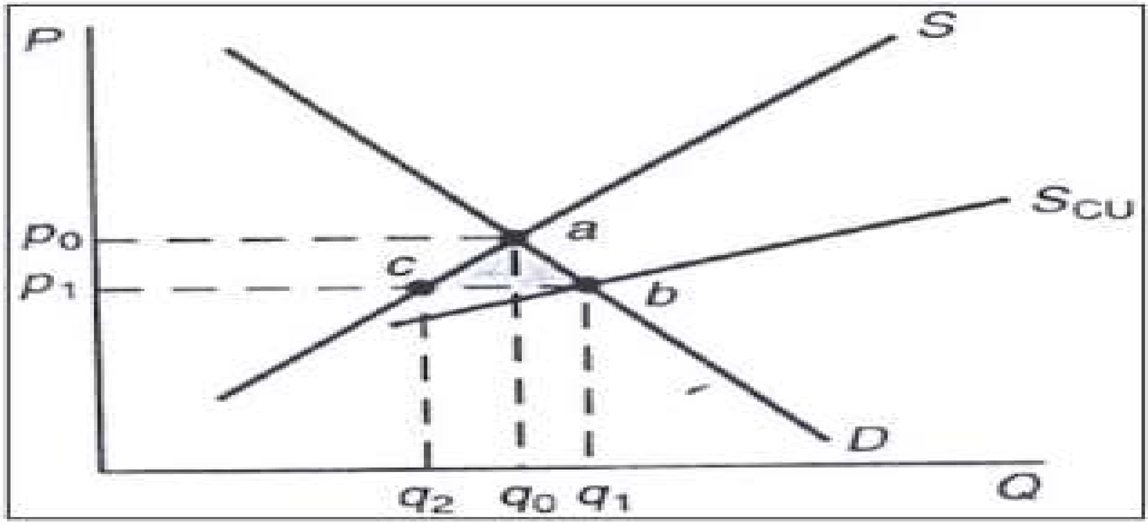
A free-floating system is where the government allows the exchange rate to be determined by free market forces. The currency may appreciate or depreciate depending on the relative strength of supply and demand in the foreign exchange market.

A fixed exchange rate would require currencies to be locked together at a particular rate. It is a fixed rate determined by the government or regulator, it cannot be affected by the changes in demand and supply.

Managed float: This is the exchange rate regime where the governments may enter into fixed exchange rate agreements whereby upper and lower limits to the exchange rate are fixed, rather than a particular rate. Normally the three rates need to be determined, a central rate plus upper and lower limits which determine the band within which the actual market rate is permitted to fluctuate.

b) **Using graphs, differentiate trade creation and trade diversion as effects of custom union**

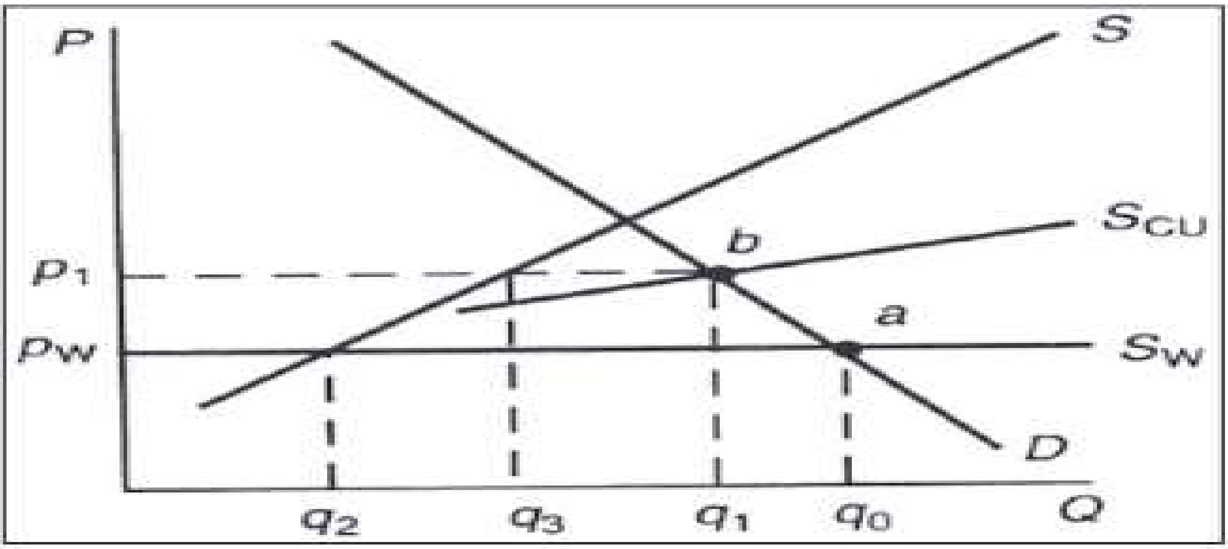
Trade-creation occurs when a change in tariffs enables consumers to buy cheaper products from more efficient producers. Trade-creation benefits consumers and efficient producers at the expense of inefficient producers in the custom union stage of the economic integration.



The giving to foreign suppliers' freedom of entry to the home market as a result of the custom union, has led to increased domestic consumption and demand (q_0 q_1) at a lower price (P_0 P_1) as a result of change in demand. However, at the lower price P_1, domestic producers will only supply q_2. Less efficient domestic producers have been squeezed out of the market resulting in a fall in domestic production (q_0 q_2).

The country will then import q_1-q_2 from foreign suppliers and this represents the trade-creation effect. Consumers' surplus has increased from P_1 to P_0 **ab** on the graph while there is a loss of profits to domestic firms from P_1 to P_0 **ac**. The result is a net welfare gain equal to the shaded triangle **cab**

Trade-diversion occurs when a change in tariffs requires consumers to purchase higher cost products from less efficient producers. Trade-diversion benefits inefficient producers at the expense of consumers and efficient producers. This trade-diversion effect can occur if, when harmonizing external tariffs, a country ends up with a relatively higher tariff on a product from a non-member that it was previously trading with



S_w represents the world supply of a product to an economy at a world price of P_w. If we assume that initially the country imposes no barriers to the importation of this product the equilibrium will be at point a with a price of P_w and domestic consumption at q_0. Of this, q_2 is supplied by domestic producers and q_0 - q_2 is imported.

If we assume that the country now enters a customs union which entails prohibitive tariff barriers for this product to non-members the relevant supply curve is now **Scu**. There is a new equilibrium at point b with price p_1 and quantity q_1. Inefficient customs union producers are now benefiting at the expense of consumers and more efficient world suppliers. Imports from efficient world producers (q_o – q_2) cease. Less efficient domestic producers increase production (q_2q_3) .The country now imports q_1 - q_3 from less efficient producers in other members of the customs union. Consumer's surplus falls by **P_wP_1ba**.

c) Calculate and comment on term of trade (TOT)

The terms of trade are concerned with the rate at which one country's goods exchange for those of other countries. Changes in the terms of trade indicate whether a country must export more or less in order to purchase a given volume of imports.

$$\boldsymbol{TOT} = \frac{\text{Weighted average of export prices}}{\text{Weighted average of import prices}}$$

Weighted average import price: FRW 27,384
Weighted average export price: FRW18,440.
The terms of trade between two countries goods will be given by:

$\boldsymbol{TOT} = \frac{\text{FRW 18,440}}{\text{FRW 27,384}}$=0.67

This means that USA goods can be exchanged to those from Rwanda at a rate of 0.67. An American can bring 0.67 of goods or services and be given 1 unit of Rwandan goods or service

d) Discuss Heckscher and Ohlin theory on the international trade

Heckscher and Ohlin developed this analysis further and argued that even countries with access to similar technologies could have different relative costs due to differences in their overall endowment of factors of production. Countries would tend to specialize in producing those products requiring the factors in which they were favorably endowed. For example, countries with a relative abundance of labour would tend to specialize in labour intensive products whereas countries with a relative abundance of capital would tend to specialize in capital intensive products.

Differences in natural resources would also play their part in determining relative costs between countries

QUESTION FIVE

Marking Guide

Question	Sub question	Description	Marks
5	(a)	**State FIVE factors that affect the potential size of the National Income**	
		Award 1 Mark for each well stated factors of national incomer. Max 5 Marks	5
	(b)	**(a) Briefly discuss FIVE criticisms of GDP per capita as a measure of economic growth**	
		Award 1 Mark for each well explained criticism of the GDP per capital. Max 5 Marks	5
	(c)	**Using the data from the above table, calculate the following**	
		Award 2 Marks for the calculation of Gross Domestic Product (GDP) at market price	2
		Award 2 Marks for the calculation of Gross National Product (GNP) at market price	2
		Award 2 Marks for the calculation of Gross National Product (GNP) at factor cost	2
		Award 2 Marks for the calculation of Net National Product (NNP) at factor cost	2
		Award 2 Marks for the calculation the GNP per capita	2
		Total	**20**

Model Answer

a) State FIVE factors that affect the potential size of the National Income

The following are the factors that affect the potential size of the National Income

- **National Resources**: The country with more national resources tend to have the bigger national income compared to those countries with lower stock of national resources
- **Nature of the Labour force (% of population, skill):** When a country has more skilled labour, it tends to have bigger national income, as they increase revenues from human capital export and increase productivity.
- **Amount of capital investment**: The more the country increases its investment, the bigger the national income will become and vice versa.
- **Institutional and Economic Environment:** The effectiveness of institutions, economic policies, and governance structures can impact national income. Stable and efficient institutions foster economic growth by providing a favorable environment for business and investment. Example: Countries with strong legal systems, transparent regulatory environments, and effective property rights typically experience higher levels of economic growth.
- Whether factors of production are combined efficiently.
- Innovation and technology.
- Political Stability.
- Availability of Foreign Loans.

- Terms of trade (i.e. amount of another country's goods which can be got for home-grown goods).

b) Briefly discuss FIVE criticisms of GDP per capita as a measure of economic growth

The GDP per capita is the total GDP allocated to total population of a given country.

The following are the criticisms of the GDP per capita as a measure of the economic growth

- It is only an average and, therefore, says nothing about the distribution of income or changes in the distribution of income over time. In other words, growing per capita income is not incompatible with increasing poverty among some sections of society.
- It says nothing about the number of hours worked. Clearly it would be preferable if rising real income was achieved with a shorter working week rather than with a longer one.
- It fails to take account of any negative (or positive) externalities in production such as pollution
- It is a measure of output whether or not the output adds to welfare. If congestion on the roads means journeys are taking longer and more petrol is being consumed as a result, this will add to GNP while hardly improving welfare.
- It fails to include welfare increasing activities that do not involve market transactions like unpaid domestic work
- The country with relatively low number of populations can be seen to be a grown country which is not always necessarily correct,
- Ignores Income Distribution: GDP per capita averages income across the entire population and does not account for how income is distributed. It may mask significant income inequality within a country.
- GDP per capita focuses solely on economic output and does not consider factors such as health, education, and overall quality of life, which are crucial for measuring well-being. GDP per capita only measures market transactions and excludes non-market activities such as household labor and volunteer work, which can contribute significantly to economic value. Example: The value of unpaid work done by homemakers is not captured in GDP per capita, even though it represents a substantial contribution to economic and social well-being.
- GDP per capita does not consider the environmental impact of economic activities. It may overlook the costs associated with pollution and resource depletion.

c) National Income Calculations

- **GDP at market price:** The Gross Domestic Product at market price is given by the summation of personal consumption, public expenditures, investment, change in stock, statistical discrepancies and net export (exports less imports). This consider the productivity of a country irrespective of who produced it(be the national or international resident)
- **GNP at Market prices:** The Gross National Product at market price is given by the total productivity of nationals irrespective of where they are located. This is given by the GDP at market price less the net factor income from abroad.
- **GNP at factor cost:** Gross national product at factor cost is given by the GNP at market price less the subsidies and taxes.
- **NNP at factor cost:** Net National Product at factor cost is arrived at by subtracting the depreciation amount from the Gross National Product at factor cost
- **GNP per capita:** The GNP per capita is given by allocating the GNP at factor cost or at market price to the country's population.

	Millions
National Income	**2024**
Personal consumption	2,130,350
Public sector current expenditure	712,575
Investment	632,325
Change in stock	(56,600)
Exports	3,647,550
Imports	(3,025,925)
Statistical discrepancy	(25,375)
GDP at market price	**4,014,900**
Net factor incomes from abroad	(709,075)
GNP at Market prices	**3,305,825**
Subsidies	42,975
Taxes	(8,975)
GNP at factor cost	**3,339,825**
Depreciation	(566,000)
NNP at factor cost	**2,773,825**
Total population	950
GNP per capita	**3,516**

QUESTION SIX

Marking Guide

Question	Sub question	Description	Marks
6	(a)	**Referring to the Circular flow of income model, use examples to differentiate leakages from injections**	
		Award 1 Mark for each well-defined leakage and injections. Award 2 Marks for examples. Max 4 Marks	4
	(b)	**Using relevant diagram, briefly explain how the model of the Circular flow of income works**	
		Award 2 Marks for a well-drawn model	2
		Award 1 mark for each well explained model players. Max 6 marks	6
	(c)	**Differentiate Marginal Propensity to Consume (MPC) from Average Propensity to Consume (APC)**	
		Award 1 Mark for well define MPC and APC	2
	D	**Briefly explain how the following budget position affect the circular flow of income of a given economy:**	
		Award 2 Marks for balanced budget	2
		Award 2 Marks for deficit budget	2
		Award 2 Marks for surplus budget	2
		Total	**20**

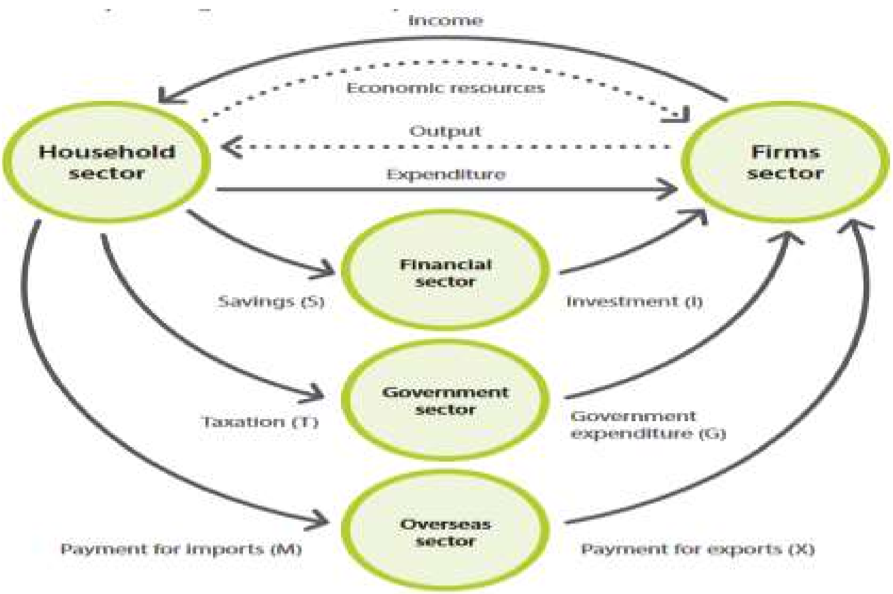
Model Answer

a) **Referring to the Circular flow of income model, use examples to differentiate leakages from injections**

Injections: Those are the variables that brings in additional resources into the circular flow of income. Such as **government expenditure, net export, and investments**

Leakages: Those are the withdrawal from the circular flow of income. **Such as savings, taxation or imports**

b) **Using relevant diagram, briefly explain how the model of the Circular flow of income works**



The following are the players of the five-sector model

Household: The household provide savings to financial sector, taxation to the government, payment for imports to the foreign sector economic resource to the business sector. The household also receives income in terms of salaries and wages from business sector, output from business sector

Government: Receives taxes from household and business firms while it provides government expenditures and subsidies to household and business firms respectively.

Business firm: This receives payment for goods and services from household, economic resources from household, subsidies from the government, payment for export by foreign sector participants, investment from the financial sector

Financial sector: Receives savings from household and business firms and provide investment to business firms

Foreign/ Oversea sector: This sector receives payment for imports from household and business firms and pays for exports to business firms

c) **Differentiate Marginal Propensity to Consume (MPC) from Average Propensity to Consume (APC)**

The proportion of any given level of income that is spent is known as the average propensity to consume (APC) while, the proportion of any change in income that is spent is known as the marginal propensity to consume (MPC)

d) **Briefly explain how the following budget position affect the circular flow of income of a given economy**

- **Balanced budget:** (G = T): injections equal withdrawals implying a neutral effect on aggregate demand; **Effect on Circular Flow:** A balanced budget means the government neither injects nor withdraws additional money from the economy. It maintains the existing flow of income without altering the overall economic balance.

- **Budget deficit:** (G > T) – injections exceed withdrawals causing aggregate demand to increase (‘expansionary budget’); **Effect on Circular Flow:** A budget deficit means the government is injecting more money into the economy than it is taking out through taxes. This can stimulate economic activity by increasing aggregate demand, but if persistent, it could lead to higher public debt.

- **Budget surplus:**(G < T) – withdrawals exceed injections causing aggregate demand to decrease (‘contractionary budget’). **Effect on Circular Flow:** A budget surplus means the government is withdrawing more money from the economy than it is injecting. This can reduce aggregate demand and potentially slow down economic growth if the surplus is used to pay off debt rather than reinvested into the economy.

QUESTION SEVEN

Marking Guide

Question	Sub question	Description	Marks
7	(a)	**Discuss THREE factors affecting the exchange rate of a given county**	
		Award 1 Mark for each well explained factor affecting exchange rate. Max 3 Marks	3
	(b)	**Discuss FIVE arguments for international trade protectionism**	
		Award 1 Mark for each well explained argument for protectionism. Max 5 Marks	5
	(c)	**a) Define the following terms as used in the international trade finance**	
		Award 2 Marks for the well-defined real exchange rate	2
		Award 2 Marks for the well-defined nominal exchange rate	2
		Award 2 Marks for the well-defined effective exchange rate	2
	(d)	**Explain THREE reasons why a country may wish to buy currency of another country**	
		Award 1 Mark for each well explained reason why a country may buy foreign currency. Max 3 Marks	3
	(e)	**Calculate the real exchange rate of prices in Rwanda over Uganda and comment on your results**	
		Award 1 Mark for formula	1
		Award 1 Mark for a well calculated real exchange rate	1
		Award 1 Mark for a well-articulated comments for the calculation real exchange rate	1
		Total	**20**

Model Answer

a) Discuss THREE factors affecting the exchange rate of a given county

The exchange rate of a country's currency is influenced by a variety of factors, each playing a significant role in determining its value relative to other currencies. Here are three key factors:

1. **Interest Rates**: Central banks adjust interest rates to achieve economic goals such as controlling inflation or stimulating growth. Higher interest rates generally attract foreign capital as investors seek higher returns. This increased demand for the currency can cause its value to appreciate. Conversely, lower interest rates may reduce demand for the currency, leading to depreciation.

2. **Economic Performance and Outlook**: The overall health and performance of an economy greatly impact its currency's exchange rate. Strong economic indicators such as GDP growth, employment rates, and trade balances tend to strengthen a currency as they signal economic stability and attractiveness for investment. Conversely, economic downturns or uncertain economic prospects can weaken a currency.

3. **Political Stability and Economic Policies**: Political stability and the perceived effectiveness of a country's economic policies are crucial determinants of its currency's exchange rate. Countries

with stable political environments and policies that promote economic growth and investment are likely to have stronger currencies. Conversely, political instability, corruption, or unpredictable policy changes can lead to currency depreciation as investors perceive higher risk.

4. **Inflation Rates:** Countries with lower inflation rates see their currency value increase relative to countries with higher inflation. Lower inflation maintains purchasing power, making the currency more attractive to foreign investors.

b) Discuss FIVE arguments for international trade protectionism

- **The infant industry argument:** an industry may need some protection against "mature" competitors in the early stages of its development. However, it is frequently the case that infant industries protected in this manner never develop to optimal efficiency and so cannot survive when protection is withdrawn.
- **To maintain domestic employment during a recession:** if there is low domestic demand, a country may introduce import restrictions so as to reserve the domestic market for domestic producers and thus protect national employment.
- **To allow non-viable industries to decline gradually**: In this way the economic and social costs will be reduced.
- **To prevent "Dumping:** i.e. the sale of goods on the domestic market at prices lower than the costs of production in their origin, i.e. to protect domestic producers against unfair competition.
- **Strategic reasons:** e.g. protection of agriculture, since a country without its own food supplies would be very vulnerable in times of war or economic recession.
- **BoP deficit:** if imports constantly exceed exports there is a great temptation to introduce protective measures (but this does not solve the underlying problems).
- **Protection against low wage economies:** since they have a big cost advantage.
- **Political Purposes:** e.g. anti-apartheid sanctions against South Africa.

c) Define the following terms as used in the international trade finance

- **Real exchange rate:** The real exchange rate (RER) is an index which measures changes in the international competitiveness of a country's goods and services
- **Nominal exchange rate:** This is simply the price of one currency in terms of another
- **Effective exchange rate:** The effective exchange rate (EER) is an index which attempts to measure the overall change in the value of one currency against a range of other currencies

d) Explain THREE reasons why a country may wish to buy currency of another country

A country may wish to buy currency of another country or a number of reasons including the following:

- To finance the purchase of foreign goods and services (Cassiterite, coffee, tourism, etc.);
- To invest in foreign country (a) in real assets (FDI) and (b) in financial assets (portfolio investments);
- The Central Bank may wish to influence the foreign exchange rate.

e) **Calculate the real exchange rate of prices in Rwanda over Uganda and comment on your results.**

$$\boldsymbol{RER} = \frac{\text{Pd} * \text{e}}{\text{Pf}}$$

Where RER is the real exchange rate, e is the nominal exchange rate, Pd is domestic the price level and P_f is the foreign price level

$$\boldsymbol{RER} = \frac{1{,}800 * 0.3}{2{,}000} = 0.27$$

Comment on the Result: The real exchange rate of 0.27 indicates that, in terms of purchasing power, the price of goods in Rwanda is lower compared to Uganda when expressed in a common currency. Specifically, it means that the Rwandan Franc (FRW) has more purchasing power relative to the Ugandan Shilling (UGX) after accounting for price level differences. This may make Rwandan goods cheaper for Ugandan buyers and potentially boost exports from Rwanda to Uganda.

End of Answer and Marking Guide.