CERTIFIED PUBLIC ACCOUNTANT

FOUNDATION LEVEL 2 EXAMINATIONS

F2.2: ECONOMICS AND BUSINESS ENVIRONMENT

DATE: THURSDAY 29, MAY 2025

MARKING GUIDE AND MODEL ANSWERS

QUESTION ONE

Marking guide

Details	Marks
a)i) Any four from the below listed used award a mark for each (1*4) = 4, consider any other valid response from the candidate	4
ii) A well explained point, award it a mark and half (1.5*2) = 3	3
b) i) Any four from the below listed well explained award a mark for each (1*4) = 4, consider any other valid response from the candidate.	4
ii) Any four from the below listed award a mark for each (1*4) = 4	4
iii) Well stated difference award 2 marks (1*2) = 2	2
iv) Any three from the below list, award a mark for each (1*3) = 3	3
Total Marks	20

Model answers

a) i) FOUR uses of the opportunity cost concept under the economic units:

Opportunity cost is the value of the next best alternative that is forgone when a choice is made. It is a fundamental concept in economics, guiding decision-making across all economic units households, firms, governments, and economies as a whole.

For Households

the opportunity cost concept helps in decision-making related to the allocation of resources such as time, money, and effort. Some of the uses of the opportunity cost concept in households include:

1. Choosing between leisure and work: The Households must decide how much time to allocate to work and how much to leisure activities. The opportunity cost of choosing leisure over work is the income that could have been earned if time was spent working

2.Choosing between consumption and saving: Households must decide how much of their income to consume and how much to save. The opportunity cost of consuming more today is the future consumption that could have been achieved if saving were made instead

For Firms

3, Choosing between different investments: Households must allocate their savings to different investments, such as stocks, bonds, or real estate. The opportunity cost of choosing one investment over another is the potential return that could have been earned if the savings were invested in the alternative option

4. Capital investment decisions: Businesses must decide whether to invest in new projects or equipment. The opportunity cost of choosing one project over another is the potential return that could have been earned if the resources were allocated to the alternative project.

5. Pricing decisions: Businesses must set prices for their products or services. The opportunity cost of choosing one price over another is the potential revenue that could have been earned if the product or service was priced differently

6. Production decisions: Businesses must decide how much of each product to produce. The opportunity cost of choosing one production level over another is the potential revenue that could have been earned if the resources were allocated to the production of a different product.

Government

7. Budget allocation: Governments must allocate funds to different sectors or programs. The opportunity cost of choosing one program over another is the potential benefits that could have been achieved if the funds were allocated to the alternative program.

8. Infrastructure investments: Governments must decide which infrastructure projects to invest in. The opportunity cost of choosing one project over another is the potential economic growth and welfare that could have been achieved if the resources were allocated to the alternative project.

9. Taxation policies: Governments must set tax rates and determine the allocation of tax revenues. The opportunity cost of choosing one tax policy over another is the potential economic efficiency and fairness that could have been achieved if the tax system was designed differently.

For Economy as a whole:

At the macroeconomic level, opportunity cost informs how an economy allocates scarce resources among competing sectors. For instance, dedicating land and labor to agriculture means fewer resources for industrial development. Policymakers use opportunity cost to analyze trade-offs and guide long-term planning for national development.

Conclusion:

The opportunity cost concept is a fundamental tool in understanding the decision-making process and resource allocation in various economic units, including households, businesses, and governments. By considering the potential benefits sacrificed in favor of a particular choice, economic actors can make more informed decisions and improve the overall efficiency of their economic systems.

Therefore, opportunity cost is crucial in making rational economic decisions. By evaluating what must be given up, individuals, firms, and governments can make informed choices that lead to more efficient use of resources and better outcomes.

a) ii) Relationship between inflation and unemployment in Rwanda

Inflation is the sustained increase in the general price level of goods and services over time, while unemployment is the condition where individuals who are able and willing to work cannot find a job. The relationship between these two is often illustrated by the Phillips Curve, which suggests an inverse relationship as unemployment falls, inflation tends to rise, and vice versa.

In Rwanda, the relationship between inflation and unemployment reflects both classical economic theory and structural realities:

Short-Run Trade-Off (Phillips Curve):
Rwanda has at times experienced rising inflation during periods of strong economic growth, when unemployment rates decline. For example, increased government spending on infrastructure or agriculture can boost employment and household incomes, leading to higher consumer demand which may, in turn, push prices up.

Supply-Side Constraints:
Rwanda's economy is still developing, and it faces structural unemployment (due to skills mismatches or rural-urban migration). Even when inflation rises (e.g., due to food or fuel prices), it may not necessarily lead to lower levels of unemployment because the inflation is not driven by excess demand but by supply-side issues.

Imported Inflation:
Inflation in Rwanda is often influenced by external factors like global oil prices or currency fluctuations, especially since it is a landlocked country heavily dependent on imports. In such cases, inflation can rise even when unemployment remains high breaking the typical Phillips Curve pattern.

Policy Response:
The National Bank of Rwanda often uses monetary policy tools (like interest rates and reserve requirements) to balance inflation control with employment generation. However, this balancing act is complex in a developing economy.

While the theoretical inverse relationship between inflation and unemployment exists, in Rwanda the dynamics are more complex due to structural issues, reliance on imports, and exposure to external shocks. As a result, inflation and unemployment may not always move in opposite directions. Policymakers must consider both demand-side and supply-side factors to manage these challenges effectively

b) i) Characteristics of the recession phase of a business cycle

The recession phase of a business cycle is characterized by a significant decline in economic activity across the economy. This phase is typically marked by a decrease in gross domestic product (GDP), rising unemployment rates, reduced consumer spending, and a general slowdown in business activity. Several key characteristics define the recession phase:

1.Decline in GDP: One of the primary indicators of a recession is a sustained decline in the country's GDP over two consecutive quarters. This decline reflects a contraction in economic output and overall economic activity.

2. Rising Unemployment: During a recession, unemployment rates tend to rise as businesses reduce their workforce or halt hiring altogether. This increase in unemployment contributes to decreased consumer confidence and spending.

3. Reduced Consumer Spending: As uncertainty about the future grows and job security diminishes, consumers tend to cut back on discretionary spending. This reduction in consumer spending further exacerbates the economic downturn.

4. Business Contraction: Many businesses experience decreased demand for their products or services during a recession, leading to reduced revenues and, in some cases, closures or bankruptcies.

5. Financial Market Volatility: The stock market often experiences increased volatility during a recession, with sharp declines in stock prices and heightened investor anxiety.

6. Credit Tightening: Lending institutions may become more cautious about extending credit during a recession, leading to tighter credit conditions for businesses and individuals.

7. Government Intervention: Governments often implement fiscal and monetary policies to counteract the effects of a recession. These measures may include stimulus packages, interest rate adjustments, and increased government spending on infrastructure projects.

8. Global Impact: Recessionary trends in one country can have ripple effects across the global economy, impacting international trade, investment flows, and exchange rates.

9. Consumer Confidence Decline: As economic uncertainty prevails, consumer confidence tends to decline, leading to further reductions in spending and investment.

10. Impact on Business Investment: Businesses may delay or cancel planned investments during a recession due to concerns about future profitability and market conditions.

In summary, the recession phase of a business cycle is characterized by declining GDP, rising unemployment, reduced consumer spending, business contractions, financial market volatility, credit tightening, government intervention, global impact, declining consumer confidence, and reduced business investment.

b) ii) Negative effects of business cycles on the economy

The negative effects of business cycles can be broadly categorized into short-term and long-term impacts.

Short-term Impacts

a. Unemployment: During a recession, businesses often cut back on their workforce to reduce costs. This leads to an increase in unemployment rates, which can have a significant impact on individuals and their families.

b. Inflation: Inflation can be affected by business cycles, with higher inflation rates during periods of economic growth and lower rates during recessions. Rapid inflation can lead to higher costs of living and reduced purchasing power.

c. Income Inequality: Business cycles can exacerbate income inequality, as those who lose their jobs during a recession may struggle to find new employment, leading to a widening gap between the rich and the poor.

Long-term Impacts

a. Economic Growth: Persistent or frequent business cycles can hinder long-term economic growth, as the time and resources spent recovering from recessions could be better utilized in fostering growth and development.

b. Reduced Investment: Business cycles can discourage investment, as investors may be hesitant to put their money into uncertain economic conditions. This can lead to slower economic growth and job creation

c. Social and Political Instability: Economic instability caused by business cycles can lead to social and political unrest, as citizens may feel frustrated and disillusioned with the lack of economic opportunity and security.

b) iii) Five Contrasts Between a Floating and Fixed Exchange Rate System

Aspect	**Floating exchange rate**	**Fixed exchange rate**
Determination	Market forces (supply and demand)	Set by the government or central bank
Flexibility	High: adjusts automatically	Low: remains constant unless officially changed
Government Intervention	Minimal	requires frequent intervention to maintain fixed level
External Shocks Response	Can absorb shocks through currency depreciation	Rigid: difficult to respond quickly to external shocks
Speculation Risk	High: currency can be volatile	Low: more stable exchange rate

b) iv) Demerits of adopting a floating exchange rate system on an economy

1. Volatility and Uncertainty

One of the primary demerits of a floating exchange rate system is its volatility. Fluctuations in currency values can make it difficult for businesses and consumers to plan and predict future expenses, which can lead to uncertainty in the economy. This uncertainty can hinder investment decisions and make it challenging for businesses to expand or maintain their operations.

2. Exchange Rate Appreciation and Depreciation

A floating exchange rate system can lead to both appreciation and depreciation of a currency, which can have negative consequences for an economy. Appreciation can make a country's exports more expensive, reducing their competitiveness in global markets. On the other hand, depreciation can make imports more expensive, leading to inflation and a reduced standard of living.

3. Loss of Monetary Policy Independence

A floating exchange rate system can make it more challenging for a central bank to implement monetary policy effectively. When a country's currency is floating, the central bank must balance its efforts to control inflation and promote economic growth with the need to stabilize the exchange rate. This can make it difficult to achieve the desired balance between these competing objectives.

4. Currency Speculation

A floating exchange rate system can encourage currency speculation, as investors and traders seek to profit from fluctuations in currency values. This can lead to destabilizing capital flows, which can exacerbate economic volatility and create difficulties for central banks in managing their monetary policy.

5. Lower Stability and Growth

In the long run, a floating exchange rate system may lead to lower economic stability and growth. The uncertainty and volatility associated with floating exchange rates can discourage investment, hinder economic growth, and ultimately result in a less prosperous economy.

In conclusion, while a floating exchange rate system has its benefits, it also presents several demerits that can negatively impact an economy. The volatility, exchange rate fluctuations, loss of monetary policy independence, currency speculation, and lower stability and growth are all potential drawbacks to consider when deciding whether to adopt this system.

QUESTION TWO

a) Stating each law (3 Marks each), differentiation with figures given (4 Marks)	10 Marks
b) Five criticisms of the law (2 Marks each)	10 Marks
Total marks	**20 Marks**

Model answers

a) Difference between the law of comparative advantage and the law of absolute advantage using the information given above for country A and B.

The principle of absolute advantage was put forward by Adam smith to show the advantages of international trade. He was opposed by mercantilists who believed that free trade leads to the loss of gold (wealth of nation).

The law of absolute advantage state that **a country has absolute advantage over other countries if it can produce a commodity at less inputs costs than others.** According to the above information, country A can produce either 10,000 tons of coffee or 20,000 meters of cotton using one unit of labour while country B can produce 2000 Tons or 10,000 meters of cotton with one unit of labour. Here Country A has absolute advantage over country B since it can produce both coffee and cotton more efficiently than country B.

On the other hand, the law of comparative advantage was put forward by David Ricardo to improve on Adam smith's principle of absolute advantage. The law of comparative advantage states that **a country has a comparative advantage over others if it can produce one or more commodities at less real cost (opportunity cost) than others**. Even if a country has absolute advantage in the production of two or more commodities, it should produce that commodity where it incurs less real costs (Opportunity cost).

From our example country:

By producing 1 ton of coffee, Country A forego 2 meters of cotton (20/10)

By producing 1 ton of coffee, Country B forego 5 meters of cotton (10/2)

This proves that country A should produce coffee and B produce cotton and the two countries benefit by exchanging surplus.

b) Criticisms of the law of comparative advantage

Unrealistic assumptions: The theory assumes only two countries and two goods, ignoring the complexity of real-world trade.

Ignores transport costs: It overlooks the cost of transporting goods, which can offset gains from trade.

Assumes perfect mobility internally: Assumes factors of production are perfectly mobile within countries and immobile between them, which is rarely true.

Static analysis: The theory does not consider technological advancement or changes in resource availability over time.

Full employment assumption: Assumes all countries are fully utilizing their resources, which is often not the case.

Neglects economies of scale: It doesn't account for increasing returns to scale, which can influence production decisions.

Overlooks structural unemployment: Shifting production can lead to job losses in less competitive industries.

Ignore non-economic factors: Political, social, or cultural factors can affect trade decisions, which the theory does not address.

QUESTION THREE

Marking Guide

(a) Introduction is to be awarded a half mark	0.5
They are three main differences, any well listed and explained, award 1 mark for each (1*3) =3	3
Conclusion is to be awarded a half mark	0.5
(b) They are four assumptions. any well state assumptions award a half mark (0.5*4) =2	2
Explanation for the stated point is to be awarded a half mark (0.5*4) =2	2
(c) They are three points-a well stated and explained points is to be (2*3)=6	6
For Roles: distinguish between AD and AS, award a mark	1
Specify how AD and AS model helps economists	1
(d) For the three explained points award 1 mark for each (1*&3)	3
Conclusion is to be awarded a mark for each	1
TOTAL	20

Model answers

a) Difference Between a Closed and an Open Economy

Aspect	Closed economy	Open economy
Trade with other countries	Does **not** engage in international trade (imports/exports)	Freely trades goods, services, and capital across borders
Capital movement	Restricts or prohibits international capital flows	Allows foreign investment and capital flows
Foreign exchange	No foreign exchange market as trade is internal	Operates in foreign currency markets
Example	Rare in practice (e.g., North Korea is the closest example)	Most countries today (e.g., Rwanda, USA, China)
Economic interdependence	Self-sufficient, dependent on internal resources	Interdependent on global economies

b) Assumptions of the theory of comparative advantage

The theory of comparative advantage, a fundamental concept in international trade, is based on several key assumptions. These assumptions are crucial in understanding the underlying principles that govern the distribution of resources and the gains from trade.

1. Perfect Competition

The first assumption of the theory of comparative advantage is that markets are characterized by perfect competition. This means that there are many buyers and sellers, and each individual has minimal influence over the market price. In such a market, firms produce and sell goods at the lowest possible cost, and consumers can purchase goods at the lowest possible price. This competitive environment encourages firms to specialize in the production of goods that they can produce at a lower opportunity cost, which in turn maximizes global efficiency.

2. Opportunity Cost

The second assumption of the theory of comparative advantage is the concept of opportunity cost. This refers to the value of the next best alternative that must be given up to produce a good or service. The opportunity cost of producing a good is the value of the best alternative that could have been produced with the same resources. This concept is crucial in determining a country's comparative advantage, as it helps to identify the goods and services that a country can produce more efficiently than others.

3. Diminishing Marginal Returns

The third assumption of the theory of comparative advantage is the principle of diminishing marginal returns. This principle states that as more resources are allocated to the production of a good or service, the additional output produced will eventually decrease. This means that a country can only gain a comparative advantage in producing a good if it has a natural advantage in that industry, as increasing production will eventually lead to a decline in efficiency.

4. Factor Mobility

The fourth assumption of the theory of comparative advantage is factor mobility, which means that resources, such as labor and capital, can be moved between industries and sectors within an economy. This assumption is important because it allows countries to specialize in producing goods and services in which they have a comparative advantage, while still meeting their domestic needs for other goods and services.

In conclusion, the theory of comparative advantage is built on four key assumptions: perfect competition, opportunity cost, diminishing marginal returns, and factor mobility. These assumptions help to explain why countries should specialize in producing goods and services in which they have a comparative advantage, leading to increased global efficiency and trade.

c) Keynesian Theory: Consumption, Investment, and Government spending

Introduction to the Keynesian Theory of Income and Employment:

The Keynesian theory of income and employment, developed by British economist John Maynard Keynes, is a significant macroeconomic theory that emphasizes the role of government intervention in stabilizing the economy. This theory argues that aggregate demand, rather than the supply side of the economy, is the primary factor in determining national income and employment levels.

The Keynesian Theory of Income and Employment

Keynesian economics focuses on three key components: consumption, investment, and government spending. These components determine the overall spending in an economy, which in turn influences income and employment. The model is based on the idea that a change in aggregate demand can lead to a change in national income and employment.

Consumption: Household consumption is a significant determinant of aggregate demand. According to the Keynesian theory, consumer spending is influenced by disposable income, which is the income remaining after taxes. When disposable income increases, consumption rises, leading to higher income and employment. Conversely, when disposable income decreases, consumption falls, resulting in lower income and employment.

Investment: Business investment in capital goods, such as machinery and equipment, also plays a crucial role in determining aggregate demand. Investment is influenced by factors such as interest rates, expected profitability, and the overall economic climate. When businesses invest in capital goods, they increase production capacity and generate income and employment opportunities.

Government Spending: Government spending, including expenditure on public goods and services, can also impact national income and employment. When the government increases spending, it generates income and employment through the multiplier effect. The multiplier effect occurs when the increased spending by the government circulates through the economy, generating additional income and employment.

The Role of Aggregate Demand and Aggregate Supply in the Keynesian Model

The Keynesian model distinguishes between aggregate demand (AD) and aggregate supply (AS) curves. A change in aggregate demand can shift the entire aggregate supply curve, leading to changes in income and employment. In contrast, a change in aggregate supply affects the price level but not the income and employment levels.

Aggregate demand (AD) = C + I + G + (X – M)

Keynes emphasized that **inadequate aggregate demand** leads to unemployment.

The AD-AS model helps economists understand how fiscal and monetary policies can be used to stabilize the economy. For example, when aggregate demand is below the full-employment level, the government can use expansionary fiscal policies (such as tax cuts or increased government spending) to increase aggregate demand and raise income and employment. Conversely, when aggregate demand is above the full-employment level, the government can use contractionary fiscal policies (such as tax increases or reduced government spending) to reduce aggregate demand and prevent inflation

d) effects of a simultaneous increase in consumer income and fuel prices

In this analysis, we will explore the impact of a simultaneous increase in consumer income and fuel prices on the economy and consumers using a well-labeled diagram. We will discuss the various factors that come into play and how they affect the overall situation.

In the given diagram, we can see two main factors affecting the economy: an increase in consumer income (denoted by the upward arrow) and an increase in fuel prices (denoted by the upward arrow). We will now examine the effects of these factors on different aspects of the economy.

The Income Effect

As consumer income increases, consumers have more disposable income to spend on various goods and services. This can lead to a higher demand for products and services, which in turn can lead to an increase in production and employment. This can result in a positive effect on the economy, as more people are employed, and businesses can grow and expand.

The Substitution Effect

The simultaneous increase in fuel prices can lead to consumers seeking alternative ways to save on fuel costs. This could result in consumers switching to more fuel-efficient vehicles, carpooling, or using public transportation. These alternatives can help reduce the overall demand for fuel, which can help mitigate the negative effects of higher fuel prices on the economy.

The Income and Substitution Effects Combined

When both the income effect and the substitution effect are considered together, the overall impact on the economy can be more complex. If consumers have more disposable income, they may choose to spend it on other goods and services instead of fuel. This can lead to a decrease in demand for fuel, which can help offset the negative impact of higher fuel prices.

Conclusion: if consumers are still heavily reliant on fuel for transportation and other essential needs, the increase in fuel prices could still lead to a decrease in disposable income. This can result in a negative effect on the economy, as consumers may have less money to spend on other goods and services, leading to a decrease in demand and potentially a slowdown in economic growth.

QUESTION FOUR

(a) Award one mark for definition	1
Three stated points, award 0.5 for well stated point (0.5*3) =1.5	1.5
Explanation for the point, award a half mark (0.5*3) =1.5	1.5
(b) Stating is a mark for each (1*5) =5	5
Explanation is a mark for each (1*5) =5	5
(c) Definition award 2 marks	2
Example, award it 2 marks	2
Assumptions award it a mark	2
Total marks	20

Model answers

a) Effects of the paradox of thrift in the Keynesian cross model

The **paradox of thrift** suggests that while saving is good for individuals, if everyone increases savings simultaneously, total consumption falls, reducing **aggregate demand**, output, and income — ultimately making everyone **worse off**.

The Paradox of Thrift is an economic phenomenon that occurs when individuals and businesses reduce their spending, which in turn reduces overall demand in the economy. This reduction in spending is typically a response to uncertainty about the future, which may be caused by factors such as recession, financial crisis, or government policy changes. The Paradox of Thrift refers to the situation where attempts by individuals and businesses to save more money actually led to a decrease in overall economic activity, rather than an increase in savings.

To understand the effects of the Paradox of Thrift on the Keynesian Cross Model, it is essential to first understand the basic principles of the model. The Keynesian Cross Model is a graphical representation of the economic theory developed by John Maynard Keynes, which focuses on the relationship between aggregate demand and aggregate supply in an economy. The model consists of four main components: consumption (C), investment (I), government spending (G), and net exports (X). The Keynesian Cross Model assumes that the economy is in equilibrium when the sum of consumption, investment, government spending, and net exports (C + I + G + X) equals the total income generated by the economy (Y).

Graphical explanation using Keynesian cross model:

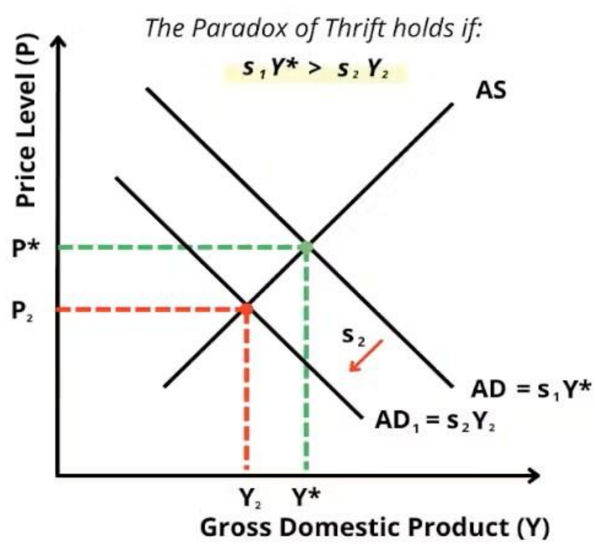

Figure 2 - Effect of paradox of thrift in the AD-AS model

In the Keynesian Cross diagram:

45-degree line: Shows points where **aggregate output = aggregate expenditure**.

Aggregate Expenditure (AE): AE = C + I + G (assuming closed economy for simplicity).

Now, let's examine the effects of the Paradox of Thrift on the Keynesian Cross Model.

1. Reduced Consumption: As individuals and businesses reduce their spending due to the Paradox of Thrift, consumption (C) decreases. This leads to a downward shift in the consumption function.

Reduced Consumption due to the Paradox of Thrift

2. Lower Investment: With lower consumption, businesses may see a decrease in demand for their products or services. This could lead to reduced investment (I) in new projects or expansion, as businesses become more cautious about their financial decisions. This results in a downward shift in the investment function.

3. Decreased Government Spending: The Paradox of Thrift may also lead to a decrease in government spending (G) due to budget constraints or an attempt to reduce the budget deficit. This can be represented as a downward shift in the government spending function.

b) Income per capita is often used as an indicator of a nation's economic progress. However, it is not the most accurate or comprehensive indicator. This essay will discuss the limitations of income per capita as an economic progress indicator, and suggest alternative measures that provide a more comprehensive understanding of a nation's economic well-being

Reasons why income per capita is not a fully accurate or comprehensive indicator of a nation's economic progress

Income inequality ignored: It doesn't show how income is distributed. A few wealthy individuals can raise the average while the majority remain poor.

Non-market transactions excluded: It excludes unpaid work (e.g., household labor, volunteer work) which contributes to well-being.

Environmental degradation overlooked: It does not subtract the cost of pollution or resource depletion, which can reduce long-term welfare.

Informal economy ignored: In many developing countries, a large part of the economy is unrecorded, understating actual income.

Cost of living differences: It does not account for differences in prices across countries or regions, which affects real purchasing power.

Quality of life is not reflected: It ignores important dimensions like health, education, security, and political freedom.

Short-term focus: It only measures current income without accounting for sustainability or future economic prospects.

Conclusion: While useful for comparison, income per capita should be supplemented with indicators like the Human Development Index (HDI), Gini coefficient, and environmental sustainability measures for a fuller picture.

c) Significance of the post-hoc fallacy in economics

Definition: The **post hoc fallacy** (Latin: *post hoc ergo propter hoc*) is a logical error that assumes that because event A happened before event B, A **caused** B even if there's no causal link.

A post hoc fallacy is the reasoning that since event B followed event A, event B must have been caused by event A. The conclusion you reach is based solely on the order of events that happened rather than taking into account other factors or potential logical reasons.

A post hoc fallacy example in economics is the government taking credit for the improvement of the economy once elections are over and it is rightfully elected in. This often happens, especially when the previous or outgoing government did not leave the economy in good standing or good economic condition. Also, the government could have left the economy at a particular point, then once the new government takes office, the economy heightens. At that point, it is easy to conclude that the rise in the economy has been caused by the new government, which could be a form of fallacious thinking. The rise in the economy could have been caused by other reasons and not solely by the election results.

The post hoc fallacy can also be depicted in economics through the assumption that the increase in unemployment is caused by minimum wage laws. This is based on the assumption that the increase in unemployment is associated with an upswing in the minimum wage. However, the unemployment increase could be attributed to other economic reasons, like increased population, caste system, aggregate demand, etc. Other examples of the post hoc fallacy in economics include poor store performance, price changes, and economic performance. These examples are not the only ones that depict the post hoc fallacy in economics, but are just a few among many others.

Importance in Economics:

Policy misinterpretation: Economists or policymakers may wrongly attribute success or failure of economic outcomes to unrelated actions (e.g., tax cuts followed by economic growth may be coincidental).

False causal relationships: It can lead to implementing policies based on **correlation, not causation**, which may have no real effect or even cause harm.

Poor economic forecasting: Faulty conclusions can mislead economic models and predictions, especially when time-based associations are misinterpreted.

Ineffective policy evaluation: Governments may believe certain policies are working when in reality the outcomes are due to other variables (e.g., global economic trends).

Education and critical thinking: Understanding the fallacy encourages **rigorous empirical testing**, econometric analysis, and the use of **counterfactuals** in economics.

Example:

If inflation falls after a central bank changes its logo, it would be fallacious to say the logo change caused the inflation drop.

QUESTION FIVE

(a) Listing a point award a half mark for case favor (0.5*4) =2	2
Explanation for the listed point, award a half mark (0.5*4) =2	2
Listing a point award a half mark for case against (0.5*4) =2	2
Explanation for the listed point, award a half mark (0.5*4) =2	2
(b) a well listing point, award a mark (1*4) =4	4
Explanation for the well listed point, award a mark (1*4) =4	4
(c) A well listed point, award a half (0.5*2) =2	2
Explanation for the listed point, award a half mark (0.5*4) =2	2
Total	20

Model answers

a) Cases in favor of and against Foreign Direct Investment (FDI)

Cases in favor of FDI:

Capital inflow**:** Brings in much-needed foreign capital, boosting domestic investment without increasing national debt.

Technology transfer**:** Introduces advanced technologies and production methods, improving efficiency and productivity.

Employment creation: Generates new job opportunities, especially in manufacturing and services sectors.

Export promotion: FDI often leads to export-oriented production, improving a country's trade balance.

Infrastructure development: Foreign investors often contribute to the development of infrastructure such as transport, energy, and communication.

Integration into global markets: Helps the host country integrate with the global economy, enhancing competitiveness and international standards.

Cases against FDI:

Profit repatriation**:** A significant share of profits may be sent back to the investor's home country, limiting domestic reinvestment.

Loss of economic sovereignty**:** Excessive foreign control over strategic sectors can weaken national control over economic decisions.

Crowding out domestic firms: Local businesses may be unable to compete with large multinationals, leading to market domination by foreign firms.

Exploitation of resources**:** Foreign firms may exploit natural or human resources without adequate benefit to the host country.

Social and cultural disruption**:** FDI can influence local cultures and lead to social tensions, especially if expatriate labor is used.

Volatility and dependence**:** Over-reliance on FDI can expose the economy to risks of sudden capital flight or political instability.

b) Positive economic effects of a prolonged fall in the value of money (i.e., inflation)

A fall in the value of money means rising prices (inflation). While inflation is typically seen as harmful, under certain conditions, especially moderate inflation, it can have positive effects.

Stimulates spending and investment: People are encouraged to spend or invest rather than hold onto cash, boosting economic activity.

Reduces real value of debt: Inflation reduces the real burden of fixed-interest debts, benefiting borrowers such as governments and businesses.

Boosts business profits: Firms may see rising revenues if prices rise faster than wages or costs.

Encourages production: Rising prices can incentivize firms to produce more, potentially reducing unemployment.

Improves export competitiveness: If domestic inflation is lower than currency depreciation, exports become cheaper internationally.

Increases government revenue: Higher prices lead to higher VAT or sales tax collections, improving public finances.

Asset value appreciation: Inflation can increase the value of real assets like property, benefiting asset holders.

c) Limitations of consumer sovereignty in an economy

Consumer sovereignty refers to the idea that consumers, through their purchasing decisions, determine what goods and services are produced.

Influence of advertising: Consumers' choices are often manipulated by persuasive marketing, limiting genuine sovereignty.

Information asymmetry: Consumers may lack accurate or full information to make informed choices.

Inequality of income: Only those with purchasing power can express their preferences — the poor have little influence on market outcomes.

Public goods and merit goods: Many essential services (like education, defense) are underprovided by markets despite being needed.

Monopolies and oligopolies: In concentrated markets, limited competition restricts consumer choice and raises prices.

Externalities: Consumption decisions may not account for environmental or social costs, e.g., overuse of fossil fuels.

Cultural and social constraints: Social norms, traditions, and government policies may restrict individual freedom to choose.

QUESTION SIX

(a) well explained point is 2 marks for each (2*5) = 10	10
(b) They are three points; a well states points award a mark for each (1*3) = 3	3
Explanation for the (b) after stating, award 1 also (1*3) = 3	3
(c) Specifying where trace creation starts, award a mark	1
Incorporation of trade restrictions award a mark	1
Specifying example of where customs have been formed all over the world, award a mark	1
Conclusion, award a mark	1
Total	20

a) Applicability of inter-industry and intra-industry trade

Inter-industry trade: This is the exchange of **different** goods between countries (e.g., Rwanda exporting coffee and importing machinery).

Applicability of inter industry trade include:

Comparative advantage: Countries export goods in which they have a comparative advantage and import what they lack.

Resource endowment differences: Countries with different natural, labor, or capital resources trade to benefit from each other's strengths.

Technology gap: Countries with advanced technologies produce and export high-tech goods, while others export raw materials.

North-south trade: Developed (North) countries trade manufactured goods; developing (South) countries trade primary goods.

Intra-industry trade: This is the exchange of **similar** goods (e.g., Rwanda importing and exporting textiles of different quality or brand).

Applicability of intra industry trade include the following:

Product differentiation: Consumers seek variety (e.g., different car models), which encourages trade in similar but differentiated products.

Economies of scale: Firms specialize and lower costs by producing larger volumes for both domestic and export markets.

Regional integration: In blocs like EAC, similar goods are traded across countries, e.g., Uganda and Kenya trading dairy products or processed foods.

In conclusion, both inter-industry trade and intra-industry trade are highly applicable concepts that offer valuable insights into the complexities of global trade patterns. While inter-industry trade emphasizes specialization and comparative advantage across different industries, intra-industry trade highlights product differentiation, competitiveness, and economies of scale within specific industries. Understanding the applicability of these concepts is crucial for policymakers, businesses, and researchers seeking to comprehend the underlying dynamics of international trade and its implications for economic development.

b) Five costs of economic integration (e.g., EAC membership costs for Rwanda)

Loss of tariff revenue: Reduction or elimination of tariffs within the EAC lowers government revenue from imports.

Loss of policy autonomy: Rwanda may have to adjust national trade or fiscal policies to conform with regional agreements, limiting flexibility.

Uneven benefits: Larger or more industrialized EAC members (e.g., Kenya) might benefit more than smaller economies like Rwanda.

Adjustment costs: Local industries may face intense competition from more developed regional firms, leading to closures or job losses.

Migration pressure: Economic integration allows freer movement of labor, which may cause social tension or job competition in the host country.

c) Process of trade creation

Trade creation occurs when economic integration (e.g., forming a free trade area) allows a country to shift from buying from inefficient domestic producers to more efficient producers in partner countries.

Steps in the process include the following:

Formation of trade agreement: Countries reduce or eliminate tariffs and quotas among members (e.g., EAC Customs Union).

Lower prices: Goods from partner countries become cheaper due to tariff elimination.

Shift in consumption: Consumers in Rwanda shift to buying cheaper, more efficiently produced goods from Kenya or Uganda instead of costly domestic options.

Resource reallocation: Domestic resources are reallocated to sectors where the country has comparative advantage.

Increased efficiency and welfare: The economy becomes more efficient, consumer choices increase, and overall welfare improves due to better allocation of resources.

QUESTION SEVEN

Marking guide

Answer	Marks
Qn. 2 (i) -Correct formula for "a" and "b" earns 2 marks each	14
Value of a and b earns 3 marks each	
The formula for total revenue earns 4 marks	
Qn. 2 (ii) a profit formula and a correct value of profit earn 1 mark each	2
Qn. 2 (iii) Allocate 0.5 mark for each correct characteristic	4
Total marks	**20**

Model answers:

i) Given $TR=ab^x$ Let TR be represented by y

$Y= ab^x$ Since "y" is an exponential function, it can be solved by the help of logarithms.

Once $y=a^x$ $\log_{10} y=\text{Log}_{10} a^x$ $\log_{10} y= x\text{Log}_{10} a$

$\text{Log}_{10}Y=\text{Log}_{10}ab^x$ $\text{Log}_{10}Y=\text{Log}_{10}a+\text{Log}b^x$

$\text{Log}_{10}Y=\text{Log}_{10}a+x\text{Log}_{10}b$ Let $A=\text{Log}_{10}a$ and $B=\text{Log}_{10}b$

$\mathbf{Log_{10}Y=A+Bx}$

Using the normal equation, the value of A and B can be obtained as follows:

X	Y	Log y	X log₁₀ Y	X^2
1	16	1.20412	1.20412	1
2	23.5	1.371068	2.7421357	4
3	32.5	1.511883	4.5356501	9
4	46	1.662758	6.6510313	16
5	66	1.819544	9.0977197	25
6	95	1.977724	11.866342	36
21	279	9.547	36.097	91

$A=\frac{\sum y-B\sum x}{n}$ $B=\frac{n\sum xy-\sum x\sum y}{n\sum x^2-(\sum x)^2}$

$B=\frac{6(36.097)-(21*9.547)}{6(91)-(21)^2}$

B=((6*36.097)-(21*9.547))/((6*91)-(21*21))

B=0.153285714 $B=\text{Log}_{10}b$ $\text{Log}_{10}b = 0.153285714$ **b=1.423265 *****

A=((9.547)-(0.153286*21))/6 A=

1.0547

a= 11.34137385***

$TR=11.34*1.423^x$

ii) **Given the total revenue and total cost functions below:**

$TC=1200+0.125x^2$ $TR=11.34*1.423^x$
Let P represent the profit function

$P = TR - TC$ $P = 11.34 * 1.423^{x} - 1200 - 0.125x^{2}$ $P = 3,325.256071$ FRW thousands
A total profit of FRW **3,325,256** will be realized by selling 17 tickets

c) Characteristics of perfect competition and monopolistic competition

Perfect Competition

Many buyers and sellers: No single firm can influence the market price.
Homogeneous products: All firms sell identical products.
Free entry and exit: Firms can enter or exit the market freely.
Perfect information: Buyers and sellers have complete knowledge about prices and products.
No government intervention: Prices are set by market forces alone.
Price taker firms: Each firm accepts the market price.
Zero long-run profit: In the long run, firms earn normal profits due to competition.
Monopolistic Competition
Many sellers: There are many firms, but each holds a small market share.
Product differentiation: Each firm offers slightly different products.
Free entry and exit: Like perfect competition, firms can freely enter or exit.
Some price control: Firms have some control due to brand loyalty.
Non-price competition: Advertising, packaging, and service are used to compete.
Downward-sloping demand curve: Each firm faces its own demand curve.
Normal profits in long run: Due to the entry of new firms, excess profits are completed away.

End of Marking Guide and Model Answers