THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL

ADVANCED CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

151/1 ECONOMICS 1

(For Both School and Private Candidates)

Time: 3 Hours **ANSWERS** **Year: 2019**

Instructions

1. This paper consists of EIGHT questions.
2. Answer all questions in section A and choose two questions each from section B and C.

1. (a) Explain five limitations of macroeconomics analysis.

Macroeconomics focuses on aggregates and general trends, which may overlook individual or regional disparities. For instance, national income may rise while some regions remain poor and underdeveloped.

It often assumes ceteris paribus (all other factors held constant), which is unrealistic. In real economies, many variables change simultaneously, affecting the accuracy of predictions.

Macroeconomic data is often delayed or estimated, reducing its reliability for timely decision-making. For example, GDP or inflation figures are revised later, causing policy errors if based on early data.

Macroeconomic models can be too theoretical and based on unrealistic assumptions, such as perfect markets or rational behavior, which do not always reflect actual human decisions.

Policy implementation based on macroeconomic analysis may produce unintended side effects. For example, increasing money supply to reduce unemployment may instead cause inflation if not well managed.

(b) What are the demerits of capitalism? Give five points.

Capitalism creates income inequality as wealth accumulates among the owners of capital, leaving workers with relatively low wages. This results in a wide gap between the rich and the poor.

It leads to exploitation of workers, where profit-maximizing employers may offer low wages and poor working conditions, especially where labor laws are weak.

Public goods and services may be neglected because private firms are profit-driven and avoid sectors like rural education or health, which are not immediately profitable.

It encourages overproduction and wastage. Firms may produce excessively to maximize profits, resulting in unsold goods, advertising overload, and depletion of resources.

Capitalism can cause economic instability through business cycles, with frequent booms and busts. During recessions, many people lose jobs and businesses collapse, affecting social welfare.

2. (a) Elaborate four factors which limit the law of diminishing returns to operate.

Technological change can delay diminishing returns. For example, using modern machines on the same land can maintain or increase productivity even with more labor added.

Improved skills or training may boost the productivity of workers, preventing the marginal output from falling as more workers are hired.

Specialization and division of labor in the early stages of adding variable inputs can increase output per worker, offsetting diminishing returns temporarily.

If other factors like land or capital are also increased slightly along with labor, the law may not strictly apply, as returns may continue rising or remain constant.

(b) Analyse six factors that contribute to low efficiency of labour in Tanzania.

Lack of adequate training and education reduces workers' skills, leading to low output. For example, untrained machine operators may cause more breakdowns and wastage.

Poor working conditions such as inadequate tools, long hours, and unsafe environments reduce motivation and performance.

Low wages and lack of incentives discourage effort and commitment. Workers earning minimal pay may not be motivated to work hard or stay with the same employer.

Health problems caused by malnutrition, diseases, and poor sanitation reduce labor productivity, especially in rural and informal sectors.

Traditional methods of production dominate in many sectors, where outdated tools and manual labor result in slow and inefficient processes.

Inadequate infrastructure such as poor roads, unreliable electricity, and lack of internet limits access to markets, communication, and modern production methods.

3. (a) A monopolist firm is facing the following demand and cost functions respectively:
$P = 140 – 2Q$
$TC = 10 + 5Q^2$

Where:
P = Price
Q = Quantity
TC = Total cost

Determine:
(i) Profit maximizing output and total revenue maximizing output.
First, get Total Revenue (TR) and Marginal Revenue (MR):
$TR = P \times Q = (140 – 2Q)Q = 140Q – 2Q^2$
$MR = d(TR)/dQ = 140 – 4Q$

$MC = d(TC)/dQ = d(10 + 5Q^2)/dQ = 10Q$

Set MR = MC:
$140 - 4Q = 10Q \rightarrow 140 = 14Q \rightarrow Q = 10$
Profit maximizing output = 10 units

To find revenue maximizing output, set MR = 0:
$140 - 4Q = 0 \rightarrow Q = 35$
Revenue maximizing output = 35 units

(ii) Maximum profit earnable to a firm.
At $Q = 10$:
$P = 140 - 2(10) = 120$
$TR = 120 \times 10 = 1200$
$TC = 10 + 5(10^2) = 10 + 500 = 510$
Profit = TR – TC = 1200 – 510 = 690

(iii) Maximum revenue earnable to a firm.
At $Q = 35$:
$P = 140 - 2(35) = 70$
$TR = 70 \times 35 = 2450$

(iv) Total cost (TC) incurred by a firm at maximum profit.
Already calculated above: TC = 510

(b) Describe six roles played by profit in the economy.

Profit encourages investment. Entrepreneurs are motivated by the possibility of earning profits, leading to innovation and economic growth.

It helps in efficient allocation of resources. Firms move resources toward more profitable uses, improving productivity and economic efficiency.

Profit serves as a reward for risk-taking. Business owners who risk their capital are compensated by the profits they earn.

It signals success or failure. A firm making high profits is likely satisfying consumer demand, while consistent losses suggest inefficiency.

Profits are reinvested in business expansion. This leads to job creation and higher income levels in the economy.

It contributes to tax revenue. Profitable firms pay corporate taxes that fund public services like healthcare and infrastructure.

4. (a) What is the meaning of the following terms:

(i) Population size
This refers to the total number of individuals living in a specific geographical area at a given time.

(ii) Overpopulation
This occurs when the number of people exceeds the capacity of the available resources and infrastructure, leading to unemployment, poverty, and environmental degradation.

(b) Giving eight points, justify the statement that ‘high rate of population growth in Tanzania have contributed to deterioration of standard of living’.

It increases pressure on social services such as education and healthcare, resulting in overcrowded schools and understaffed hospitals.

Leads to high youth unemployment due to limited job creation opportunities compared to population growth.

Strains food supply as arable land becomes scarce, causing food insecurity and malnutrition.

Reduces per capita income as national income is shared among more people, lowering individual purchasing power.

Results in inadequate housing and rise in informal settlements or slums, especially in urban areas.

Increases environmental degradation due to overuse of land, water, and forest resources to meet population needs.

Slows down infrastructure development as the government cannot keep up with demand for roads, water, and electricity.

Raises dependency ratio, meaning fewer workers must support more children and elderly, limiting savings and investments.

5. (a) Study carefully the following table and answer the questions that follow:

(i) The weighted index of prices for the year 1 and 2.

Weighted Index = (Σ Price Index × Weight) / Σ Weight

Year 1:
= (100×4 + 100×2 + 100×1 + 100×3) / (4+2+1+3)
= (400 + 200 + 100 + 300)/10 = 100

Year 2:
= (125×4 + 120×2 + 80×1 + 200×3) / (4+2+1+3)
= (500 + 240 + 80 + 600)/10 = 142

(ii) The percentage change in the weighted index over the period.
= (142 – 100)/100 × 100 = 42%

(iii) The change in the value of money on goods over the period.
Since prices have increased by 42%, the value of money has decreased.
New value = 100 / 142 = 0.704 → Money lost 29.6% of its value over the period.

(b) Describe the following economic concepts:

(i) Inconvertible notes
Currency that cannot be exchanged for a fixed amount of a commodity like gold or silver; it is only backed by the government's declaration.

(ii) Narrow money supply
It includes the most liquid forms of money, like coins, notes in circulation, and demand deposits (checking accounts).

(iii) Legal tender
Currency that must be accepted for payment of debts within a country by law, such as banknotes and coins issued by the central bank.

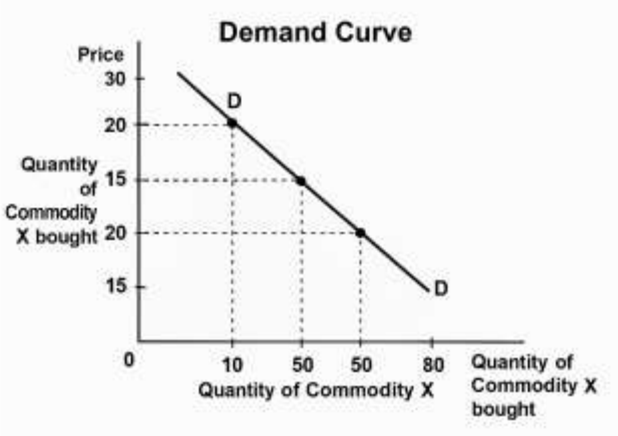
(iv) Precautionary demand for money balances
Money held for unexpected events or emergencies like illness or job loss. It's part of the motive to hold liquid cash.

(v) Paper managed system
A monetary system where the supply and value of currency is managed by the government or central bank rather than being tied to a physical commodity like gold.

6. (a) Study carefully the following Table and answer the questions that follow:

Price of Commodity Y (Tshs)	Quantity of Commodity X bought
10	70
15	60
20	50
25	40
30	30

(i) Draw the graph to represent the information given in the Table.



(ii) What does the graph drawn in (a)(i) show. Briefly explain.
The graph is a demand curve that slopes downward from left to right. It shows the inverse relationship between the price of a good and the quantity demanded: as price increases, quantity demanded decreases.

(iii) Explain the economic interpretation of the graph by giving examples.
The graph illustrates the law of demand. For example, when the price of commodity Y increases from 10 to 30 Tshs, the quantity of commodity X purchased falls from 70 to 30 units. This behavior reflects consumers' tendency to buy less when prices rise due to reduced purchasing power and shifting to substitutes.

(iv) Calculate the elasticity of demand when price increases from 15 to 20 Tshs.

Elasticity (Ed) = (% change in quantity demanded) / (% change in price)
$\%\Delta Q = (50 - 60) / 60 \times 100 = -16.67\%$
$\%\Delta P = (20 - 15) / 15 \times 100 = 33.33\%$
$Ed = -16.67 / 33.33 = -0.5$ (Inelastic demand)

(v) Provide six reasons to prove the shape of the normal demand curve.

The law of diminishing marginal utility: As a consumer buys more units, each additional unit gives less satisfaction, so they are willing to pay less.

Income effect: When price decreases, the real income of consumers increases, allowing them to buy more.

Substitution effect: A fall in the price of a good makes it more attractive compared to substitutes, increasing its demand.

More consumers enter the market at lower prices, expanding total demand.

Consumers may buy in larger quantities for storage when prices are low, increasing demand temporarily.

A higher price discourages consumption and leads to rationing behavior, hence a fall in quantity demanded.

7. (a) Explain four criteria used to classify the market structures in an economy.

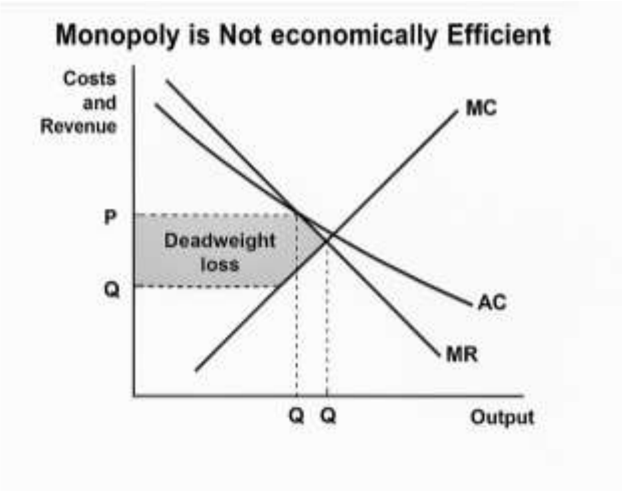
Number of firms: Perfect competition has many small firms, monopoly has one, oligopoly has few dominant firms.

Nature of the product: Markets may deal in homogeneous (e.g., wheat) or differentiated (e.g., mobile phones) products.

Ease of entry and exit: Perfectly competitive markets allow free entry and exit; monopolies have high barriers.

Level of control over price: In monopoly, the firm is a price maker; in perfect competition, firms are price takers.

(b) With clear labelled diagram, explain why the monopoly is not economically efficient.



Explanation: A monopolist sets output where marginal cost (MC) equals marginal revenue (MR), not where MC = price (as in perfect competition). This results in restricted output and higher prices. Deadweight loss occurs because some mutually beneficial trades between buyers and sellers do not happen, leading to allocative inefficiency.

8. (a) Analyse three types of unemployment which normally exist even if the economy reaches full employment.

Frictional unemployment: Caused by workers temporarily transitioning between jobs. For example, a teacher relocating to another city may be jobless during the move.

Structural unemployment: Caused by mismatch between skills and job requirements. A textile worker may become jobless when factories automate processes.

Seasonal unemployment: Occurs in industries with seasonal demand, like agriculture or tourism. Workers in sugarcane farms may be jobless during non-harvest months.

(b) Discuss seven major indicators which signify economic crisis.

High unemployment rate: A rise in joblessness indicates economic distress and shrinking productivity.

Negative GDP growth: Falling output over successive quarters confirms a recession or economic contraction.

Rapid inflation or hyperinflation: Prices rise uncontrollably, reducing purchasing power and destabilizing the economy.

Bank failures or financial instability: Closure of banks or stock market crashes signal loss of confidence and capital flight.

Fall in consumer confidence: When people reduce spending due to fear of income loss, it reflects a deepening crisis.

Trade deficits and currency devaluation: When imports exceed exports significantly, it weakens the domestic currency and increases debt.

Rising poverty levels: More people fall below the poverty line, increasing demand for welfare and reducing overall development.