THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL OF TANZANIA

DIPLOMA IN SECONDARY EDUCATION EXAMINATION

713 **GEOGRAPHY**

Time: 3 Hours. **ANSWER** **Year: 2001 p.m.**

Instructions

1. This paper consists of sections A, B and C.
2. Answer **all** questions in sections A and **two (2)** questions from each of section B and C.
3. Section A carries **40** marks, section B and section C carries 30 marks each.
4. Cellular phones and unauthorized materials are **not allowed** in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).

1. Distinguish between weather and climate, and explain how altitude influences temperature patterns in East Africa.

   Weather refers to the short-term atmospheric conditions of a place, such as temperature, rainfall, and wind, over a short period like hours or days. Climate refers to the average weather patterns of a place recorded over a long period, typically 30 years or more.

   Altitude influences temperature patterns because temperature decreases with increasing height above sea level. In East Africa, highland areas such as Mount Kilimanjaro and the Kenyan highlands are cooler than lowland areas, even though they are near the equator. This temperature drop occurs at an average lapse rate of about 0.6°C for every 100 meters of ascent.

2. Discuss four causes of glacial erosion and their resulting landforms.

   Plucking occurs when glacier ice freezes onto rock surfaces and pulls away fragments as it moves, forming jagged landscapes such as roche moutonnées.

   Abrasion happens when debris embedded in the glacier scrapes against rock surfaces, polishing them and forming striations.

   Freeze-thaw weathering weakens rock around glaciers, aiding in its removal and forming features such as scree slopes.

   Meltwater erosion from streams beneath glaciers can carve tunnels and depressions, forming subglacial channels and hollows.

3. Outline three reasons why some rivers in Tanzania are seasonal.

   Seasonal rainfall patterns cause rivers to flow only during rainy seasons, such as in semi-arid central Tanzania.

   High evaporation rates in hot, dry areas reduce river discharge quickly after rain stops.

   Lack of permanent water sources such as glaciers or springs means rivers rely solely on rainfall, making them temporary.

4. Explain the significance of the Indian Ocean to the economy of Tanzania (four points).

It supports the fishing industry by providing marine resources such as tuna, prawns, and lobsters for local consumption and export.

The ocean facilitates trade through ports like Dar es Salaam and Tanga, enabling import and export activities.

It attracts tourists to beaches and islands like Zanzibar, contributing to foreign exchange earnings.

It offers potential for offshore natural gas exploration, boosting the energy sector and industrial development.

5. Discuss three ways human activities contribute to climate change in Tanzania.

Deforestation for timber, agriculture, and charcoal production reduces carbon absorption and increases greenhouse gas concentration in the atmosphere.

Burning of fossil fuels in industries, transport, and power generation releases large amounts of carbon dioxide, a major greenhouse gas.

Poor agricultural practices such as overgrazing and slash-and-burn farming release methane and nitrous oxide, which trap heat in the atmosphere.

6. Outline three differences between intensive and extensive livestock farming.

Intensive livestock farming uses small areas of land with high capital and labor input, whereas extensive farming uses large areas with low inputs.

Intensive farming often involves stall-feeding and supplementary feeding, while extensive farming relies mainly on natural pasture.

Intensive farming produces high yields per animal due to controlled conditions, whereas extensive farming yields are lower due to reliance on natural factors.

7. Suggest four measures to improve small-scale farming productivity in Tanzania.

Providing farmers with improved seeds and fertilizers can increase crop yields and quality.

Training farmers in modern farming techniques such as irrigation, pest control, and soil conservation can improve efficiency.

Improving access to credit enables farmers to invest in tools, inputs, and storage facilities.

Enhancing rural infrastructure such as roads and markets ensures farmers can transport and sell their produce more easily.

8. With examples, explain four economic uses of forest resources in East Africa.

Forests provide timber for construction and furniture-making, as seen in commercial harvesting from the East Usambara Mountains.

They supply firewood and charcoal, which are major sources of energy in rural and urban areas.

Forests support the tourism industry by attracting visitors to forest reserves like Kakamega and Udzungwa.

They provide non-timber products such as honey, medicinal plants, and wild fruits, which support local livelihoods.

9. Discuss three factors influencing the distribution of population in Tanzania.

Fertile soils in areas like Kilimanjaro and Mbeya encourage dense populations due to agricultural productivity.

Water availability from lakes, rivers, and springs supports settlement for domestic, farming, and industrial needs.

Climate conditions influence settlement, with cooler highland regions attracting more people compared to hot and arid lowlands.

10. Outline three importance of population census to a country.

It provides data for planning public services such as schools, hospitals, and roads according to population needs.

Census figures help in allocating government resources fairly among regions based on population size.

It informs policy-making and development strategies by showing population trends, growth rates, and demographic characteristics.

11. Examine six factors affecting the exploitation of mineral resources in Tanzania.

Accessibility of the mining site determines whether minerals can be exploited economically. Remote areas without roads or rail connections face higher transportation costs, making exploitation less attractive.

Availability of capital is critical because mining requires large investments in machinery, labor, and processing facilities. Limited financial resources slow down mineral development.

Type and quality of the mineral influence exploitation; high-grade minerals with strong market demand, such as gold and tanzanite, attract more investment than low-grade or less valuable minerals.

Government policies and regulations, including licensing procedures, taxation, and environmental laws, can encourage or discourage mining operations. Favorable policies attract investors, while restrictive or unstable regulations hinder growth.

Availability of skilled labor ensures proper operation of machinery and efficient extraction. Lack of trained personnel can lead to lower productivity and safety risks.

Environmental concerns, such as the need to protect ecosystems, may restrict mining in sensitive areas, balancing exploitation with conservation needs.

12. Discuss six environmental problems associated with urban growth in East Africa.

Air pollution increases due to vehicle emissions, industrial activities, and open burning of waste, affecting human health and contributing to climate change.

Water pollution results from untreated sewage and industrial waste entering rivers and lakes, harming aquatic life and endangering water supplies.

Deforestation occurs as land is cleared to expand urban settlements, reducing biodiversity and affecting local climate.

Solid waste accumulation becomes a problem when collection services cannot keep up with the growing population, leading to unsanitary conditions.

Noise pollution from traffic, construction, and industries disrupts daily life and can cause stress and hearing problems.

Loss of green spaces due to unplanned urban expansion reduces recreational areas and increases the urban heat island effect.

13. Assess six benefits of regional integration to member states in East Africa.

It promotes trade by reducing tariffs and other trade barriers, allowing member states to sell goods and services more freely across borders.

It enhances political cooperation, fostering peace and stability through joint problem-solving and conflict resolution mechanisms.

Regional integration supports infrastructure development by pooling resources for large-scale projects such as roads, railways, and power interconnections.

It increases market size, enabling producers to benefit from economies of scale and encouraging industrial growth.

It facilitates the movement of people and labor, allowing workers to seek employment opportunities in neighboring countries.

Member states can collaborate on environmental conservation and natural resource management, addressing issues like water sharing and wildlife protection.

14. Evaluate six limitations of hydroelectric power production in Tanzania.

Seasonal variations in rainfall reduce water flow in rivers, affecting the reliability of power generation during dry seasons.

High initial construction costs for dams and associated infrastructure make hydro projects financially demanding.

Siltation in reservoirs from upstream soil erosion reduces water storage capacity and turbine efficiency.

Environmental impacts such as the flooding of ecosystems and displacement of communities create opposition to hydro projects.

Limited suitable sites for large-scale dams restrict the expansion of hydroelectric capacity.

Climate change, with its unpredictable weather patterns, increases the risk of droughts and floods, making hydroelectric production less reliable.

15. Discuss four advantages and four disadvantages of using practical work in teaching Geography.

Practical work allows students to apply theoretical knowledge in real-life situations, enhancing understanding.

It develops observational and analytical skills as students collect, record, and interpret data.

Practical activities increase student engagement and motivation by making lessons interactive.

They prepare students for examinations that include practical components, improving performance.

However, practical work can be time-consuming, reducing the coverage of syllabus content.

It requires resources and equipment, which may be unavailable in some schools.

Weather conditions can disrupt outdoor practical sessions, limiting effectiveness.

Large class sizes can make managing practical activities difficult for the teacher.

16. Explain six principles of effective classroom management in Geography teaching.

Clear communication of rules and expectations helps maintain order and focus during lessons.

Effective use of teaching aids and materials enhances understanding and keeps students engaged.

Active monitoring of student activities ensures participation and minimizes distractions.

Positive reinforcement, such as praise and rewards, motivates good behavior and performance.

Flexibility in teaching methods accommodates different learning styles and keeps lessons interesting.

Efficient time management ensures that lessons are completed within the allocated period, maintaining a steady learning pace.

17. Describe six problems a teacher may face when using ICT in teaching Geography.

Limited access to computers and projectors in schools can hinder the integration of ICT into lessons.

Poor internet connectivity in some areas restricts access to online resources and interactive content.

High costs of purchasing and maintaining ICT equipment strain school budgets.

Lack of training for teachers reduces confidence and ability to use ICT effectively.

Technical issues such as software malfunctions or power outages can interrupt lessons.

Overreliance on ICT may reduce the use of other effective teaching methods and limit practical field experiences.

18. Suggest six ways of integrating environmental education into the Geography curriculum.

Including environmental topics such as conservation, pollution control, and climate change in the syllabus.

Using field trips to natural sites like forests, rivers, and conservation areas to provide real-life examples of environmental issues.

Encouraging project work on local environmental challenges and possible solutions.

Inviting guest speakers from environmental organizations to share expertise with students.

Integrating environmental case studies into mapwork, statistics, and practical exercises.

Organizing school-based environmental campaigns such as tree planting and clean-up activities to promote active participation.