THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL OF TANZANIA

DIPLOMA IN SECONDARY EDUCATION EXAMINATION

713 **GEOGRAPHY**

Time: 3 Hours. **ANSWER** **Year: 2004 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).

SECTION A (40 Marks)

Answer all questions in this section.

1. Explain the significance of East African highlands to the Republic of Tanzania.

The East African highlands, including areas like Kilimanjaro and the Usambara Mountains, support agriculture, a key economic pillar in Tanzania. Fertile volcanic soils and favorable rainfall enable the cultivation of crops like coffee and bananas, boosting exports and farmer incomes in regions like Arusha.

They attract tourism, generating significant revenue. Mount Kilimanjaro, Africa's highest peak, draws climbers globally, supporting local economies through jobs in guiding and hospitality, enhancing Tanzania's tourism industry.

The highlands serve as water catchments. Rivers originating in the highlands, such as the Pangani, supply water for irrigation and domestic use in lowland areas, supporting food security and livelihoods in regions like Tanga.

2. Outline four shortcomings of air transport in East Africa.

High operational costs limit affordability. In Tanzania, air travel between Dar es Salaam and Dodoma is expensive, restricting access for many citizens and reducing its widespread use.

Limited infrastructure hinders connectivity. In East Africa, rural areas like Rukwa lack airports, making air transport inaccessible and limiting regional economic integration.

Weather dependency affects reliability. In Kenya, heavy rains disrupt flights at smaller airports, causing delays and impacting transport reliability for passengers and cargo.

Environmental impact is a concern. Air transport in Uganda contributes to carbon emissions, conflicting with sustainability goals and increasing environmental degradation in urban areas like Entebbe.

3. (a) Define a valley.
(b) Mention two types of valleys in Tanzania.

(a) A valley is a low-lying area between hills or mountains, often formed by erosion or tectonic activity, typically containing a river or stream that shapes its landscape and supports ecosystems.

(b) Rift valleys, formed by tectonic forces, include Tanzania's Great Rift Valley, characterized by steep escarpments. V-shaped valleys, shaped by river erosion, are found in the Usambara Mountains, with narrow, steep sides.

4. Show three ways a Geography teacher can avoid the halo effect in assessment.

Use clear rubrics for objective grading. In Arusha, assessing map skills with specific criteria, like accuracy, ensures evaluations focus on performance, not student reputation.

Implement anonymous grading. In Dodoma, assigning codes to exam papers prevents bias from familiarity, ensuring fair assessment of topics like climate patterns.

Diversify assessment methods. In Mwanza, combining tests, projects, and fieldwork on population dynamics provides a balanced evaluation, reducing reliance on single impressions.

5. Explain three causes of desertification in Tanzania's semi-arid regions.

Overgrazing reduces vegetation cover. In Shinyanga, livestock consume grasses faster than they regenerate, exposing soil to erosion and accelerating desertification.

Deforestation for fuelwood removes trees. In Dodoma, cutting trees for charcoal destabilizes soil, increasing wind erosion and creating desert-like conditions.

Climate change disrupts rainfall patterns. In Singida, declining and erratic rainfall dries soils, limiting plant growth and contributing to land degradation.

6. Describe four impacts of rapid population growth on Tanzania's economy.

Population growth strains infrastructure, raising costs. In Dar es Salaam, overcrowding demands more housing and roads, diverting funds from agriculture and slowing economic growth.

It increases unemployment pressures. In Dodoma, job creation lags behind the influx of youth, leading to economic instability and reduced household incomes.

Growing food demand drives agricultural innovation. In Mbeya, intensive farming to meet needs boosts crop production, stimulating economic activity through markets.

A larger workforce enhances economic potential. In Arusha, population growth provides labor for tourism in national parks, though it requires skills training to maximize benefits.

7. With the aid of a diagram, illustrate dendritic and trellis drainage patterns.

A dendritic drainage pattern resembles tree branches, with tributaries joining at acute angles. In Tanzania's coastal plains, rivers like the Pangani form a branching network due to uniform geology.

A trellis drainage pattern forms in areas with alternating rock layers, resembling a grid. In the Eastern Arc Mountains, rivers flow along weaker rock, with tributaries joining at right angles.

8. List three advantages of using teacher-made materials in Geography lessons.

Teacher-made materials are cost-effective. In Dodoma, using local sand for relief models reduces costs compared to commercial resources, making lessons affordable.

They are tailored to local contexts. In Mwanza, a teacher's map of Lake Victoria's fishing zones connects lessons to students' lives, enhancing relevance.

They encourage student engagement. In Morogoro, hand-drawn climate charts involve students in creation, fostering interest compared to static ready-made resources.

9. Explain three procedures for teaching the solar system to Form II students.

Use visual aids for an introductory lecture. In Dodoma, a projector displaying the solar system's planets clarifies concepts like orbits for Form II students, making them engaging.

Conduct a model-building activity. In Arusha, students create a scaled solar system with balls, measuring distances to understand planetary positions, promoting hands-on learning.

Facilitate discussions linking to Geography. In Mwanza, exploring how the sun's position affects Tanzania's climate connects celestial concepts to real-world geographical phenomena.

10. Outline three roles of quantitative techniques in Geography studies.

Quantitative techniques enable precise data analysis. In Dar es Salaam, calculating population density provides accurate insights for urban planning and resource allocation.

They support spatial modeling. In Morogoro, regression analysis predicts rainfall trends, aiding farmers in planning agricultural activities and mitigating risks.

They enhance map-making accuracy. In the Serengeti, GIS quantifies spatial data for detailed conservation maps, supporting tourism and environmental planning.

SECTION B (30 Marks)

Answer two (02) questions from this section.

11. Analyse five impacts of population growth on water resources in Tanzania.

Population growth increases water demand, straining supplies. In Dar es Salaam, urban expansion overuses groundwater, depleting aquifers and limiting access for residents.

It leads to water pollution. In Mwanza, increased waste from growing populations contaminates Lake Victoria, harming water quality and affecting fishing communities.

Deforestation from population pressure reduces water catchments. In Arusha, clearing forests for farmland decreases water retention, lowering river levels like the Pangani.

Overuse of rivers for irrigation depletes resources. In Dodoma, farmers extract water for crops, reducing downstream flow and impacting ecosystems and communities.

Population growth hinders water infrastructure development. In Morogoro, limited funds for expanding water systems struggle to meet rising demand, causing shortages.

12. Explain three natural and three human causes of air pollution in urban Tanzania.

Dust storms degrade air quality naturally. In Dodoma's urban outskirts, winds lift dry soil, reducing visibility and causing respiratory issues for residents.

Volcanic activity releases pollutants. Near Mount Meru in Arusha, ash and sulfur dioxide from eruptions pollute urban air, impacting health and visibility.

Wildfires emit smoke naturally. In Morogoro's urban fringes, seasonal grassland fires release particulates, worsening air quality and affecting public health.

Vehicle emissions are a human cause. In Dar es Salaam, heavy traffic releases carbon monoxide, creating smog and degrading urban air quality.

Industrial activities emit pollutants. Factories in Dar es Salaam produce smoke and chemicals like sulfur dioxide, harming air quality and urban health.

Waste burning pollutes air. In Dodoma's informal settlements, burning garbage due to poor waste management releases toxic fumes, contributing to air pollution.

13. Discuss five techniques for teaching environmental conservation to Form III students.

Use case studies to illustrate conservation issues. In Arusha, analyzing deforestation in the Eastern Arc Mountains helps students understand impacts and solutions, fostering critical thinking.

Conduct fieldwork for practical exposure. Visiting a reforestation site in Morogoro allows students to observe conservation practices, connecting theory to real-world applications.

Incorporate group discussions. In Dodoma, discussing sustainable agriculture engages students in proposing conservation strategies, enhancing collaborative learning.

Use visual aids like videos. In Mwanza, showing documentaries on Tanzania's wildlife conservation engages students, making complex concepts accessible and interesting.

Assign projects on local conservation. In Zanzibar, students research coastal management, applying knowledge to propose solutions, promoting independent learning and engagement.

14. Comment on five advantages of using the jigsaw technique in Geography teaching.

The jigsaw technique promotes collaborative learning. In Morogoro, students work in groups to study climate zones, sharing findings to build teamwork and communication skills.

It encourages active participation. In Arusha, each student researches a topic like soil erosion, ensuring all contribute to the lesson, increasing engagement.

It fosters deeper understanding. In Dodoma, students teaching peers about population dynamics reinforce their own knowledge, enhancing retention of geographical concepts.

The technique accommodates diverse learners. In Mwanza, assigning roles like map analysis suits different abilities, ensuring inclusive learning in Geography classes.

It develops research skills. In Zanzibar, students researching coastal ecosystems for jigsaw tasks learn to find and present data, preparing them for advanced studies.

SECTION C (30 Marks)

Answer two (02) questions from this section.

15. Explain five importance of spatial understanding in Geography studies.

Spatial understanding analyzes human-environment interactions. In Dar es Salaam, mapping urban growth reveals impacts on coastal ecosystems, guiding sustainable planning.

It enhances map-reading skills. In Morogoro, students interpreting topographic maps understand river systems, essential for fieldwork and geographical analysis.

It supports disaster management. In Dodoma, mapping flood-prone areas predicts risks, enabling effective planning to protect communities and infrastructure.

Spatial understanding informs resource management. In Arusha, analyzing water sources like Lake Manyara aids sustainable allocation for agriculture in dry regions.

It fosters global awareness. Studying trade routes through Tanzania's ports helps students understand global economic connections, broadening their geographical perspective.

16. Discuss five contributions of renewable energy to sustainable development in Tanzania.

Renewable energy reduces environmental degradation. Solar projects in Singida minimize carbon emissions, supporting sustainable development by preserving ecosystems.

It enhances energy access in rural areas. In Rukwa, off-grid solar systems provide electricity, improving quality of life and supporting sustainable economic growth.

Renewable energy creates jobs. In Dodoma, wind farm projects employ locals in construction and maintenance, boosting incomes and fostering sustainable livelihoods.

It promotes energy independence. In Mwanza, geothermal plants reduce reliance on imported fuels, stabilizing energy costs and supporting economic sustainability.

Renewable energy supports climate resilience. In Morogoro, hydropower ensures reliable electricity despite droughts, sustaining development in changing climates.

17. (a) List five instruments used in a school weather station.
(b) Explain four stages in establishing a weather station in a school.

(a) Five instruments used in a school weather station are a thermometer (measures temperature), rain gauge (measures rainfall), anemometer (measures wind speed), barometer (measures air pressure), and hygrometer (measures humidity).

(b) Site selection ensures accurate readings. In Dodoma, an open school courtyard free from obstructions like buildings is chosen for reliable weather data collection.

Instrument installation follows. In Arusha, a Stevenson screen is set 1.2–1.5 meters above ground for thermometers, with rain gauges in open areas per standards.

Training staff and students is critical. In Morogoro, workshops teach reading anemometers and recording rainfall, ensuring accurate data for Geography lessons.

Establishing a data collection routine is essential. In Mwanza, students record daily weather parameters, fostering discipline and enabling analysis of local climate trends.

18. Analyse four types of evaluation in Geography teaching and one use of each type.

Formative evaluation monitors ongoing progress. In Dodoma, quizzes on climate patterns help teachers adjust lessons to improve student understanding before final exams.

Summative evaluation assesses overall achievement. In Arusha, a final exam on map skills evaluates mastery, determining readiness for advanced Geography topics.

Diagnostic evaluation identifies student needs. In Mwanza, a pre-test on population dynamics tailors lessons to address weaknesses, ensuring effective instruction.

Ipsative evaluation tracks individual improvement. In Morogoro, comparing a student's progress in soil erosion analysis motivates personal growth in geographical skills.