THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL OF TANZANIA

DIPLOMA IN SECONDARY EDUCATION EXAMINATION

713 **GEOGRAPHY**

Time: 3 Hours. **ANSWER** **Year: 2006 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 three roles of quantitative techniques in Geography studies.

Quantitative techniques enable precise data analysis in Geography studies. For example, in Tanzania, statistical methods like calculating population density in Dar es Salaam help geographers understand urban growth patterns, providing accurate insights for planning and resource allocation.

They facilitate spatial modeling and prediction. Techniques such as regression analysis are used to predict rainfall trends in regions like Morogoro, aiding farmers in planning agricultural activities and mitigating climate-related risks.

Quantitative techniques enhance map-making accuracy. In Tanzania, tools like GIS (Geographic Information Systems) quantify spatial data to create detailed maps of areas like the Serengeti, supporting conservation and tourism planning with precise geographical information.

2. Outline four problems facing the implementation of Tanzania's population policy.

Limited public awareness hinders the policy's success. In rural areas like Rukwa, many communities lack knowledge about family planning due to inadequate outreach, reducing the adoption of population control measures.

Insufficient funding affects program implementation. The Tanzanian government struggles to finance health facilities and family planning services in regions like Shinyanga, limiting access to contraceptives and education.

Cultural resistance opposes population control measures. In some communities, such as those in Dodoma, beliefs favoring large families persist, undermining efforts to promote smaller family sizes as outlined in the policy.

Weak infrastructure limits policy reach. Remote areas like Kigoma lack adequate roads and health centers, making it difficult to deliver family planning services and monitor policy implementation effectively.

3. (a) Define water harnessing.
(b) Mention two methods of water harnessing in Tanzania.

(a) Water harnessing is the process of collecting, storing, and managing water resources to meet human and environmental needs, such as irrigation, domestic use, or power generation, often through infrastructure like dams or wells.

(b) One method is dam construction, such as the Stiegler's Gorge dam on the Rufiji River, which stores water for hydroelectric power and irrigation. Another method is rainwater harvesting, used in Dodoma, where rooftop systems collect rain for domestic and agricultural use.

4. Describe three qualities of a good Geography-specific instructional objective, with one example.

A good Geography-specific instructional objective is specific, clearly stating the expected outcome. For example, "Students will identify three causes of soil erosion in Arusha" ensures a focused goal, guiding teachers and students toward clear learning targets.

It is measurable, allowing assessment of student progress. The objective "Students will draw a map of Tanzania's rift valleys with 80% accuracy" enables teachers to evaluate performance through observable results, ensuring accountability.

It is achievable, tailored to students' abilities. An objective like "Students will explain two impacts of urbanization in Dar es Salaam" is realistic for Form II students, fostering confidence while aligning with curriculum goals.

5. Show three ways to teach the volcanic process to Form III students.

Use visual aids like diagrams and videos to explain volcanic processes. In a Morogoro classroom, a teacher can show a video of Mount Kilimanjaro's formation, illustrating magma movement and eruption types to make the concept engaging and clear.

Conduct a model-building activity. Students in Dodoma can create a simple volcano model using clay and baking soda to simulate eruptions, reinforcing understanding of volcanic processes through hands-on learning.

Organize a field trip to a volcanic site. Visiting Ngorongoro Crater allows Form III students to observe volcanic features like calderas, connecting theoretical knowledge to real-world examples and enhancing retention.

6. Explain four environmental problems caused by nomadic pastoralism in East Africa.

Overgrazing degrades vegetation, leading to soil erosion. In Tanzania's Manyara region, pastoralists' livestock consume grasses faster than they regenerate, exposing soil to wind and rain, reducing land productivity.

Deforestation occurs as pastoralists clear land for grazing. In Uganda's Karamoja region, trees are cut to create pasture, reducing biodiversity and disrupting ecosystems, contributing to environmental degradation.

Water resource depletion strains ecosystems. In Kenya's Maasai Mara, nomadic herders overuse rivers and wells for livestock, lowering water levels and affecting aquatic habitats and other users.

Soil compaction from livestock trampling reduces fertility. In Tanzania's Shinyanga region, heavy grazing compacts soil, hindering water infiltration and plant growth, leading to degraded landscapes and reduced agricultural potential.

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

A trellis drainage pattern forms in areas with alternating hard and soft rock, resembling a rectangular grid. In Tanzania's Eastern Arc Mountains, rivers flow along weaker rock layers, with tributaries joining at right angles, creating a trellis-like structure.

A parallel drainage pattern occurs on uniform slopes, with rivers flowing in the same direction. In Tanzania's coastal plains, streams flow parallel to each other toward the Indian Ocean, driven by the gentle slope of the terrain.

8. List three advantages of using an atlas in Geography lessons.

An atlas provides accurate spatial information. In Mwanza schools, students use atlases to study Tanzania's topography, enhancing their understanding of physical features like mountains and rivers through detailed maps.

It supports visual learning of global patterns. In Arusha, an atlas helps students visualize climate zones or population distribution, making abstract concepts like global trade routes more accessible and engaging.

It fosters map-reading skills. In Dodoma, students use atlases to practice interpreting scales and coordinates, building essential geographical skills for analyzing spatial data in exams or fieldwork.

9. Explain three precautions to avoid errors during a tape survey.

Ensure proper calibration of the tape. Before conducting a survey in Morogoro, check that the measuring tape is accurate and undamaged to avoid incorrect distance measurements, ensuring reliable data.

Maintain a straight tape during measurement. In a survey in Arusha, keep the tape taut and aligned to prevent errors from sagging or bending, ensuring precise measurements of land features.

Account for environmental factors like slope. In hilly areas like Lushoto, adjust measurements for terrain gradients using techniques like stepping to avoid errors in distance calculations caused by uneven ground.

10. Differentiate between overpopulation and underpopulation with one example each.

Overpopulation occurs when a region's population exceeds its resource capacity, causing strain. In Dar es Salaam, overcrowding leads to housing shortages and water scarcity, overwhelming infrastructure and resources.

Underpopulation is when a region has fewer people than its resources can support, limiting development. In Rukwa, low population density leaves fertile land underfarmed, hindering agricultural and economic growth.

SECTION B (30 Marks)

Answer two (02) questions from this section.

11. Analyse six impacts of population growth on forest resources in Tanzania.

Population growth increases deforestation for farmland. In Morogoro, communities clear forests to grow crops like maize, reducing forest cover and threatening biodiversity in areas like the Eastern Arc Mountains.

It heightens demand for fuelwood, depleting forests. In rural Dodoma, households rely on wood for cooking, leading to extensive tree cutting, which degrades forest ecosystems and reduces carbon sequestration.

Population pressure drives illegal logging. In Tanga, growing demand for timber for construction fuels unauthorized logging, destroying habitats for species like colobus monkeys and disrupting forest ecosystems.

It causes habitat fragmentation. In Arusha, expanding settlements fragment forests, isolating wildlife populations in areas like Tarangire National Park, reducing genetic diversity and threatening species survival.

Increased human activity leads to forest fires. In Shinyanga, accidental fires from agricultural clearing destroy forests, reducing tree cover and exacerbating soil erosion in vulnerable ecosystems.

Population growth strains conservation efforts. In the Selous Game Reserve, encroaching settlements limit resources for forest protection, weakening anti-poaching measures and threatening forest sustainability.

12. Explain four ways to rectify power rationing in developing countries.

Investing in renewable energy reduces power rationing. In Tanzania, expanding solar and wind projects in regions like Singida provides alternative energy sources, stabilizing supply during peak demand periods.

Upgrading infrastructure improves electricity distribution. In Kenya, modernizing transmission lines reduces power losses, ensuring consistent electricity delivery to urban areas like Nairobi, minimizing outages.

Promoting energy efficiency reduces demand. In Uganda, campaigns encouraging energy-saving appliances in Kampala lower consumption, easing pressure on the grid and reducing the frequency of rationing.

Diversifying energy sources enhances reliability. In Tanzania, combining hydroelectric power from the Rufiji River with geothermal energy from Mbeya ensures a steady supply, mitigating rationing during droughts.

13. Discuss five factors hindering hydroelectric power development in East Africa.

High construction costs limit hydroelectric development. Building dams, like Tanzania's Stiegler's Gorge, requires significant investment, straining budgets in developing countries and delaying projects.

Environmental concerns restrict dam projects. In Uganda, dams on the Nile River disrupt fish migration and ecosystems, leading to opposition from conservationists, slowing hydroelectric development.

Unreliable rainfall affects water availability. In Kenya, droughts reduce water levels in rivers like the Tana, lowering dam efficiency and discouraging investment in hydroelectric projects.

Land displacement causes social challenges. In Tanzania, dam projects like those on the Pangani River require relocating communities, creating resistance and complicating project implementation.

Limited technical expertise hinders progress. In East Africa, a shortage of skilled engineers for designing and maintaining dams, as seen in Rwanda, delays hydroelectric projects and increases reliance on external support.

14. Elaborate five importance of spatial understanding in studying Geography.

Spatial understanding helps analyze human-environment interactions. In Tanzania, mapping population distribution in Dar es Salaam reveals how urban growth impacts coastal ecosystems, guiding sustainable planning.

It enhances map-reading and navigation skills. Students in Morogoro use spatial knowledge to interpret topographic maps, understanding features like rivers, which is essential for fieldwork and geographical analysis.

Spatial understanding supports disaster management. In Dodoma, mapping flood-prone areas helps predict and mitigate flood impacts, enabling effective planning to protect communities and infrastructure.

It informs resource management decisions. In Arusha, spatial analysis of water sources like Lake Manyara aids in allocating resources for agriculture, ensuring sustainable use in water-scarce regions.

It fosters global awareness. Studying spatial patterns, such as trade routes through Tanzania's ports, helps students understand global economic connections, enhancing their perspective on Geography's role in globalization.

SECTION C (30 Marks)

Answer two (02) questions from this section.

15. Explain five stages to follow when preparing to teach environmental conservation for Form III students.

Identify clear objectives for the lesson. In Arusha, teachers set goals like "Students will explain three methods of soil conservation," ensuring focus on practical environmental concepts relevant to Form III students.

Select relevant content and resources. In Morogoro, teachers choose materials like diagrams of afforestation or case studies on Tanzania's forest reserves, aligning with the syllabus to engage students effectively.

Plan interactive teaching methods. In Dodoma, incorporating group discussions or fieldwork on local conservation practices, like terracing, encourages active learning and connects theory to real-world applications.

Prepare assessment tools. Designing quizzes or projects, such as analyzing conservation impacts in Mwanza, allows teachers to evaluate student understanding and adjust lessons to address knowledge gaps.

Organize a field trip for practical exposure. Visiting a conservation site like Ngorongoro Crater enables students to observe reforestation efforts, reinforcing environmental conservation concepts through hands-on experience.

16. Discuss five ways coastal management contributes to sustainable development in Tanzania.

Coastal management protects marine ecosystems, supporting fisheries. In Zanzibar, preserving coral reefs ensures sustainable fish stocks, securing livelihoods for fishing communities and promoting economic stability.

It mitigates coastal erosion, safeguarding infrastructure. In Dar es Salaam, constructing seawalls prevents beach erosion, protecting roads and buildings, which supports long-term urban development and economic growth.

Coastal management promotes eco-tourism. In Tanga, conserving mangroves attracts tourists, generating revenue while preserving biodiversity, contributing to sustainable tourism development in coastal regions.

It enhances climate resilience. Restoring wetlands in Bagamoyo buffers against sea-level rise, protecting communities and ensuring sustainable land use in the face of climate change impacts.

It supports community empowerment. Training programs in Pemba teach locals sustainable fishing practices, improving incomes and fostering sustainable resource use, which drives social and economic development.

17. Analyse three disaster management phases and three activities for each phase.

The preparedness phase focuses on planning to reduce disaster impacts. First, communities in Dodoma conduct drills for floods, training residents on evacuation procedures. Second, schools teach disaster awareness, educating students on earthquake safety. Third, local governments stockpile supplies like food and medical kits to ensure readiness.

The response phase involves immediate actions during a disaster. First, in Dar es Salaam, rescue teams evacuate people from flood zones to safety. Second, emergency medical care is provided to the injured, using mobile clinics. Third, temporary shelters are set up to house displaced residents, ensuring basic needs are met.

The recovery phase restores affected areas post-disaster. First, in Morogoro, damaged infrastructure like roads is repaired to restore access. Second, communities receive aid to rebuild homes, supporting economic recovery. Third, reforestation projects are initiated to restore ecosystems affected by floods or landslides.

18. Explain four advantages and four disadvantages of the inquiry method in Geography teaching.

An advantage is that the inquiry method promotes active learning. In Arusha, students researching Tanzania's climate engage with data, fostering curiosity and deeper understanding of geographical concepts like rainfall patterns.

It develops critical thinking skills. Investigating soil erosion in Dodoma encourages students to analyze causes and solutions, preparing them to address real-world environmental challenges effectively.

The method fosters independent learning. Students in Mwanza studying urbanization take ownership of their research, building skills to find and interpret geographical information autonomously.

It encourages collaboration. Group inquiries in Zanzibar on coastal management allow students to share ideas, improving teamwork and communication skills essential for Geography studies.

A disadvantage is the time-intensive nature. Preparing inquiry activities, like studying volcanic processes in Morogoro, requires significant planning, potentially limiting syllabus coverage within tight schedules.

It demands significant resources. Conducting fieldwork on river systems in Dodoma requires equipment like maps, which may be unavailable in underfunded schools, limiting the method's feasibility.

The inquiry method may overwhelm weaker students. In Arusha, students struggling with self-directed research on population dynamics may feel confused, requiring extra teacher support to stay on track.

It can lead to uneven learning outcomes. In Mwanza, varied student abilities in analyzing eco-tourism data may result in inconsistent understanding, challenging teachers to ensure uniform progress.