THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL OF TANZANIA

DIPLOMA IN SECONDARY EDUCATION EXAMINATION

713 **GEOGRAPHY**

(SUPPLEMENTARY)

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

Instructions

1. This paper consists of sections A, B and C.

2. Answer **all** questions from Section A and **two (2)** questions from each of section B and C.

3. Section A carries **40** marks, Section B and C carry 30 marks each.

4. Cellular phones are **not** allowed inside the examination room.

5. Write your **Examination Number** on every page of your answer booklet

SECTION A (40 Marks)

Answer all questions in this section.

1. Examine four major physiographic provinces within the East African region, describing for each its dominant landforms and how these features influence settlement and transport patterns.

The **East African Rift Valley** is characterized by a series of deep valleys, escarpments, and volcanic mountains. Settlements are concentrated on fertile valley floors, while transport routes often follow the rift floor rather than crossing steep escarpments.

The **Highlands and Plateaus**, such as the Ethiopian and Kenyan highlands, have elevated terrain with gentle slopes. These areas support dense agricultural settlements, and roads and railways are easier to construct on relatively flat elevated terrain.

The **Coastal Lowlands** along the Indian Ocean feature sandy plains, lagoons, and estuaries. Settlements are concentrated near water sources and ports, facilitating maritime transport and trade.

The **Lakes and Swamp Regions**, including areas around Lakes Victoria and Tanganyika, consist of depressions and wetlands. Settlements are sparse due to flooding risks, and transport is mainly by boat or along limited roads built on raised areas.

2. Outline four socio-economic or cultural reasons that tend to sustain elevated fertility levels in many low-income countries, and for each reason explain one likely policy measure to address it.

Cultural preference for large families arises from traditions valuing many children. Policy measures could include community awareness programs promoting the benefits of smaller family size.

Low female education levels limit knowledge of reproductive health. Policies could focus on improving girls' access to secondary education and vocational training.

High child mortality rates encourage parents to have more children to ensure survival. Policies should strengthen healthcare systems and immunization programs to reduce infant and child mortality.

Economic reliance on children for labor in agriculture or family businesses leads to larger families. Policy interventions could include social welfare support and promotion of mechanized farming to reduce dependence on child labor.

3. Identify four proximate causes of neonatal and infant deaths in Tanzania, and briefly explain how each cause leads to increased mortality.

Premature birth exposes infants to underdeveloped organs, increasing vulnerability to infections and complications.

Birth asphyxia results from oxygen deprivation during delivery, leading to brain damage or death if not promptly managed.

Neonatal infections, such as sepsis or pneumonia, can overwhelm an infant's immune system, causing rapid deterioration.

Malnutrition weakens immunity and growth, making infants more susceptible to diseases and reducing survival chances.

4. Define prismatic compass surveying and contrast its principal working features with those of a plane table survey.

Prismatic compass surveying is a method of determining directions and bearings using a magnetic compass with a prism for precise sighting.

Unlike plane table surveying, which involves directly plotting positions on a drawing board in the field, prismatic compass surveys primarily record angular directions and distances to be plotted later. Prismatic compass surveys are faster but less detailed, while plane table surveys allow immediate visual plotting of terrain features.

5. Describe four ways in which past glacial activity has contributed to present-day economic activities in central Europe, giving a short economic example for each.

Formation of fertile soils from glacial deposits supports agriculture, such as wheat cultivation in northern Germany.

Creation of lakes and water reservoirs provides opportunities for hydroelectric power and fisheries, e.g., Lake Constance.

Exposure of mineral deposits allows mining of gravel, sand, and coal in formerly glaciated regions.

Tourism development benefits from glacial valleys and mountains, attracting visitors for skiing and hiking, as seen in the Swiss Alps.

6. Assess four consequences, two beneficial and two harmful, of the growing tourism sector on Tanzania's rural communities.

Employment creation is beneficial, providing jobs in guiding, hospitality, and transport.

Infrastructure development, such as roads and electricity, enhances living standards in rural areas.

Environmental degradation occurs when tourism leads to deforestation, soil erosion, or waste accumulation.

Cultural erosion may result from commercialization of traditional practices and loss of indigenous knowledge.

7. (a) Define environmental contamination in your own words.

Environmental contamination refers to the introduction of harmful substances into air, water, or soil that negatively affect ecosystems and human health.

7. (b) Present a classification of contamination by medium and source.

Contamination can be classified by medium: air, water, and soil.

It can also be classified by **source**: industrial, agricultural, domestic, or natural.

7. (c) For one class you named, give a local example and discuss one mitigation measure.

Water contamination from industrial sources occurs near factories discharging untreated effluents into rivers, such as in the Keko industrial area in Dar es Salaam.

A mitigation measure is enforcing wastewater treatment regulations and installing effluent treatment plants to prevent harmful chemicals from entering water bodies.

8. (a) Provide a concise definition of pollution.

Pollution is the introduction of substances or energy into the environment that cause adverse effects on humans, ecosystems, or materials.

8. (b) Name four principal categories of pollution encountered globally.

Air pollution, **water pollution**, **soil pollution**, and **noise pollution**.

8. (c) Choose one category and explain two pathways by which it affects human health.

Air pollution affects respiratory health by inhalation of particulate matter, leading to asthma and bronchitis.

It can also enter the bloodstream through fine particles, causing cardiovascular diseases.

9. List and explain the four fundamental physical or infrastructural preconditions required to site and operate a large hydroelectric installation.

A **reliable water source** with sufficient flow is necessary to generate power efficiently.

Appropriate topography, such as steep gradients or valleys, facilitates dam construction and water storage.

Access to transmission networks allows generated electricity to reach consumers effectively.

Stable geological conditions ensure dam safety and reduce risks of structural failure.

10. Discuss four ways in which the study of Geography contributes to national development goals in Tanzania, giving a short example for each.

Geography informs land use planning, guiding settlement and agricultural development, such as planning new urban centers.

It supports natural resource management, e.g., sustainable mining in the Geita Goldfields.

Geographical knowledge aids disaster preparedness, such as flood risk mapping along the Rufiji River.

It promotes infrastructure development by helping locate roads, railways, and ports efficiently.

SECTION B (40 Marks)

Answer two (2) questions from this section.

11. The Ministry of Education claims that geography lessons build both analytical and practical skills among students. Discuss four distinct skill sets that students develop through sustained geography instruction, and for each skill indicate one occupational or civic use.

Map reading and spatial analysis help students navigate and interpret spatial data; useful for surveyors and urban planners.

Data collection and observation develop precision and recording skills, valuable for environmental monitoring officers.

Critical thinking and problem-solving enable students to assess causes and effects of geographical phenomena; applicable in disaster management.

Communication and reporting skills help in presenting findings clearly, important for GIS specialists and community educators.

12. (a) What constitutes instructional aids in the context of secondary-school Geography?

Instructional aids are tools or materials that facilitate teaching and learning, including maps, charts, models, digital resources, and field equipment.

12. (b) Evaluate three advantages and two limitations of using digital maps as instructional aids in Tanzanian classrooms.

Advantages include interactivity, allowing students to explore layers of information, up-to-date data, ensuring current geographic information, and visual engagement, making concepts more understandable.

Limitations include dependence on electricity and internet connectivity, which may be unreliable, and high cost of software or devices, limiting access in some schools.

12. (c) Propose two low-cost aids suitable for schools with limited electricity.

Printed topographic maps allow students to practice map reading and plotting.

Simple physical models made from cardboard or clay demonstrate landforms and relief features.

13. A recent field exercise collected land-use points using GPS, sketch maps, and hand-written transects. Critically analyze four recording techniques commonly used for geographical information, comparing them in terms of precision, ease of use, and suitability for student fieldwork.

GPS devices provide high precision and accurate coordinates but may require technical skill and power sources.

Sketch maps are easy to produce and interpret but may lack exact scale and accuracy.

Hand-written transects allow systematic data collection along a line but can be time-consuming and prone to human error.

Photography captures visual evidence and is easy to use but may not provide quantitative measurements without additional analysis.

14. Explain why a clearly organized syllabus is essential for a geography teacher. In your answer, analyze four specific functions the syllabus performs in planning, assessment, resource allocation, and continuity of instruction.

A syllabus guides **planning** by outlining topics, objectives, and time allocation, ensuring comprehensive coverage of the curriculum.

It informs assessment, specifying competencies and outcomes to be measured through tests and practical exercises.

It aids resource allocation, helping teachers prepare maps, models, and materials for each lesson efficiently.

It ensures continuity of instruction, providing a sequential framework that builds knowledge progressively and avoids content gaps.

SECTION C (20 Marks)

Answer two (2) questions from this section.

15. (a) Define what a lesson plan is, highlighting its key components.

A lesson plan is a structured guide that outlines the objectives, content, teaching methods, learning activities, assessment strategies, and resources for a specific lesson.

15. (b) Prepare a 45-minute lesson plan for Form One learners on "Diurnal Rotation of the Earth," including objectives, learning activities, assessment, and resources.

Lesson Objective: Students will explain the concept of Earth's diurnal rotation and its effects on day and night.

Introduction (5 min): Ask students when and why day changes to night, prompting discussion.

Main Activities (25 min): Demonstrate using a globe and a flashlight to simulate sunlight and rotation; students rotate globes to observe day/night cycles.

Assessment (10 min): Students label diagrams showing Earth at different times and explain day-night occurrence.

Conclusion (5 min): Recap key points and emphasize the importance of understanding rotation for timekeeping and navigation.

Resources: Globe, flashlight, chart papers, and markers.

16. Identify and explain four pedagogical strategies that effectively develop students' fieldwork skills in geography practicals, giving one classroom or field example for each strategy.

Demonstration: Teacher shows proper soil sampling technique in the field, and students replicate it.

Guided practice: Students measure river flow with teacher guidance, building accuracy and confidence.

Group work: Students work in teams to map a local area, enhancing cooperation and observation skills.

Reflection and discussion: After fieldwork, students present findings in class, fostering critical thinking and evaluation of results.

17. Draft a lesson plan that demonstrates the Think-Pair-Share technique for teaching "Interpreting Topographic Profiles" to Form Two students, specifying time allocation for each phase and expected student outputs.

Lesson Objective: Students will interpret contour lines and topographic profiles accurately.

Think (10 min): Individually, students examine a contour map and identify key features.

Pair (10 min): Students discuss their observations with a partner, correcting misunderstandings and refining ideas.

Share (15 min): Pairs present interpretations to the class; teacher facilitates discussion and clarifies concepts.

Assessment (10 min): Students sketch a simple topographic profile based on the map provided.

Expected Outputs: Accurate identification of landforms, correctly labeled profiles, and improved interpretation skills.

18. Analyze four roles that assessment serves in the geography classroom, and for each role describe one practical method a teacher might use to fulfill it.

Diagnostic role: Identifies students' prior knowledge; use pre-tests at the start of a unit

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Formative role: Monitors progress during lessons; use quizzes or in-class questioning.

Summative role: Evaluates overall achievement; use end-of-term exams or practical reports.

Feedback role: Provides guidance for improvement; review assignments and give written or verbal feedback highlighting strengths and areas for improvement.