THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL OF TANZANIA

DIPLOMA IN SECONDARY EDUCATION EXAMINATION

713 **GEOGRAPHY**

(SUPPLEMENTARY)

Time: 3 Hours. **ANSWER** **Year: 2005**

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. Compare four prominent landform belts in the East African region, explaining how each belt shapes agricultural land use and major transport routes.

The **Great Rift Valley** is characterized by a series of deep valleys and volcanic mountains. Its fertile volcanic soils support intensive agriculture such as horticulture and tea plantations. Transport routes often follow the valley floors where gradients are gentler, facilitating road and rail construction.

The **highland plateaus**, such as the Ethiopian and Kenyan Highlands, have moderately flat terrain at higher elevations. These areas are favorable for cultivation of cereals, coffee, and livestock grazing. Major highways and railways are constructed along the plateau rims to connect urban centers.

The **coastal lowlands** along the Indian Ocean have sandy soils and mangrove swamps. Agriculture focuses on coconut, cashew, and salt production, while transport is heavily influenced by proximity to ports, making roads parallel to the coastline essential for trade.

The **interior plains**, like the Serengeti and Maasai Steppe, are mostly flat grasslands. They support pastoralism and mechanized farming. Transport infrastructure such as roads is often linear, connecting market towns, but poorly developed in areas with seasonal flooding.

2. Explain four cultural or economic drivers that commonly result in sustained high fertility in many sub-Saharan populations, giving for each driver one likely social consequence.

Preference for large families is often cultural, linked to social status and lineage continuation. The social consequence is increased dependency ratios and strain on family resources.

Child labor in agriculture encourages high fertility, as more children contribute to farm work. This can limit access to education for children and perpetuate cycles of poverty.

Limited access to family planning services results from economic constraints or cultural opposition. The social consequence is frequent pregnancies that increase maternal and infant health risks.

Low female educational attainment reduces awareness of reproductive health and family planning options. This often leads to early marriage and repeated childbearing, contributing to slower socio-economic development.

3. Identify four immediate medical or social factors that increase newborn and infant fatalities in Tanzania, and for each state a short prevention measure.

Neonatal infections, such as sepsis, are caused by poor hygiene during delivery. Prevention involves promoting clean delivery practices and sterile equipment.

Low birth weight often results from maternal malnutrition. Preventive measures include maternal nutrition programs and supplementation.

Limited access to healthcare facilities delays treatment for complications. Prevention requires expansion of maternal and child health services in rural areas.

Poor breastfeeding practices increase vulnerability to malnutrition and disease. Promotion of exclusive breastfeeding in the first six months can reduce infant deaths.

4. Describe the working principle of a theodolite, and outline two ways its use in fieldwork improves angular measurement compared with simpler survey tools.

A **theodolite** measures horizontal and vertical angles by aligning a telescope with survey points and reading angular graduations on the instrument.

It allows **precise angle measurements**, far more accurate than compass bearings.

It facilitates **repeatability of readings**, reducing human error when comparing multiple survey points across a site.

5. Discuss four economic activities that have emerged in formerly glaciated terrain in northern Europe, and explain briefly why glacial legacy supports each activity.

Hydroelectric power generation benefits from glacial valleys with steep gradients and reliable water flow.

Tourism, including skiing and hiking, thrives in landscapes with glacial lakes and mountainous scenery.

Agriculture, particularly dairy and pastoral farming, is supported by fertile glacial soils in valleys and plains.

Mining, including extraction of sand, gravel, and mineral deposits, is facilitated by glacial deposits left in moraines and drumlins.

6. Examine two major economic gains and two environmental or social costs associated with expanding international tourism in Tanzania.

Economic gains include increased foreign exchange earnings from tourists visiting parks and coastal resorts.

Job creation in hospitality and transport sectors provides employment for local communities.

Environmental costs involve habitat degradation in national parks and coral reefs.

Social costs include cultural disruption and increased cost of living for local populations near tourist hotspots.

7. (a) Provide your own definition of contamination of the environment.

Environmental contamination is the introduction of harmful substances into air, water, or soil that adversely affect ecosystems or human health.

(b) Give a typology of contamination by receptor and by origin.

By **receptor**, contamination can affect water, soil, or air. By **origin**, it can be industrial, agricultural, or domestic.

(c) For one receptor you listed, present a brief local example and suggest one mitigation policy.

For **water**, contamination occurs in rivers from untreated sewage discharge in Dar es Salaam. Mitigation involves constructing wastewater treatment facilities and enforcing effluent standards.

8. (a) Offer a short definition of pollution as used in geography.

   Pollution is the introduction of substances or energy into the environment that cause harm to living organisms or natural systems.

   (b) List four principal media through which pollution operates worldwide.

   Air, water, soil, and noise.

   (c) Select one media and present two mechanisms by which pollutants are transported.

   For **air**, pollutants such as smoke and dust are transported by wind currents and atmospheric convection, spreading contaminants over large areas.

9. Enumerate and explain four site or resource conditions essential for a river-driven electricity scheme to be feasible.

   Reliable river flow ensures continuous generation of hydroelectric power throughout the year.

   Steep gradient provides sufficient water velocity to drive turbines efficiently.

   Proximity to demand centers reduces transmission losses and costs.

   Stable geological foundation is necessary to support dams and turbines safely.

10. Discuss four contributions geography instruction can make to Tanzania's planning and disaster-management capacity, giving one concrete example for each.

    Spatial awareness helps planners decide where to locate schools or hospitals; for example, using maps to site new health centers.

    Hazard identification enables communities to prepare for floods or landslides by recognizing high-risk zones.

    Resource management knowledge informs sustainable land-use planning; for instance, identifying areas suitable for irrigation.

Analytical skills help evaluate data for policy decisions, such as mapping urban growth to improve road networks.

SECTION B (40 Marks)

Answer two (2) questions from this section.

11. A district-level employer claims geography graduates have critical workforce skills. Describe four distinct competencies students gain from geography learning, and for each indicate a job or civic application.

Cartographic skills allow graduates to prepare maps for urban planning offices or GIS-based businesses.

Analytical reasoning helps in environmental impact assessments for construction projects.

Field data collection trains students for roles in survey departments or census work.

Spatial problem-solving equips students to contribute to disaster management or logistics planning.

12. (a) What are educational resources used in geography lessons?

These include textbooks, maps, globes, aerial photographs, GPS units, and digital datasets that facilitate teaching and learning.

(b) Critically evaluate three benefits and two limitations of using field-based data collection for secondary-school geography.

Benefits include practical skills acquisition, real-world observation, and reinforcement of theoretical knowledge.

Limitations involve logistical constraints such as transportation costs and safety concerns for students in remote areas.

(c) Recommend one low-cost device that can increase field accuracy and explain why.

A **handheld GPS** improves positional accuracy of recorded features, is portable, and reduces errors compared with manual mapping techniques.

13. During a mapping exercise students recorded features using drone imagery, handheld GPS, and sketches. Critically assess four common techniques for capturing geographic information in terms of accuracy, cost, and student suitability.

Drone imagery offers high accuracy and broad coverage but is expensive and requires skilled operation.

Handheld GPS is moderately accurate, affordable, and easy for students to use in the field.

Sketch maps are low-cost and promote observation skills but may be less accurate.

Transect notes are affordable and simple to record but may be time-consuming and subjective.

14. Explain why a coherent course outline is vital for a geography instructor. In your answer analyze four roles the outline plays in teaching, assessment, resource planning, and continuity of instruction.

A **coherent outline** guides lesson sequencing, ensuring topics are taught logically.

It assists **assessment planning** by aligning learning objectives with evaluation methods.

It facilitates **resource planning** by identifying materials and fieldwork needs in advance.

It ensures **continuity** across classes, allowing teachers to build progressively on prior knowledge and maintain consistency in instruction.

SECTION C (20 Marks)

Answer two (2) questions from this section.

15. (a) Define a structured lesson outline used by teachers.

A structured lesson outline is a written plan that specifies objectives, activities, resources, timing, and assessment methods to guide effective teaching.

(b) Draft a 45-minute lesson outline for Form One about “Daily spin of Earth and observable effects,” including aims, starter activity, main tasks, and assessment.

Aims: Explain Earth's rotation and its observable effects such as day and night.

Starter activity: Ask students to observe shadows and discuss changes throughout the day (5 minutes).

Main tasks: Demonstrate Earth's rotation using a globe (15 minutes); conduct small group observations of sunlight angles (15 minutes); students discuss and record findings (5 minutes).

Assessment: Short quiz or oral questioning on rotation, day-night cycle, and shadows (5 minutes).

16. Identify four pedagogical approaches that strengthen students' competence in practical mapping, give one classroom or field example for each.

Demonstration: Teacher models compass use in class before fieldwork.

Guided practice: Students measure distances using tape and pacing in school grounds.

Peer teaching: Students pair to check each other's map sketches during fieldwork.

Problem-based learning: Students create a local map from real observations and suggest improvements.

17. Produce a lesson plan that applies Think-Pair-Share to teach students how to extract slope information from contour maps, include timings and expected student products.

Think (5 min): Students individually analyze a contour map and identify steep vs gentle slopes.

Pair (10 min): Students discuss their observations in pairs and compare slope calculations.

Share (10 min): Pairs present results to class, producing a class slope chart or summary table.

Assessment (5 min): Teacher evaluates correctness and clarity of class outputs.

18. Analyze four functions of assessment in geography classes, and for each suggest an appropriate assessment technique a teacher could use.

Formative assessment monitors ongoing learning; technique: in-class questioning.

Summative assessment evaluates cumulative achievement; technique: end-of-term exams.

Feedback provides guidance for improvement; technique: written comments on assignments.

Motivation encourages engagement; technique: practical fieldwork tasks with scoring rubrics.