THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL OF TANZANIA

DIPLOMA IN SECONDARY EDUCATION EXAMINATION

713 **GEOGRAPHY**

(SUPPLEMENTARY)

Time: 3 Hours. **ANSWER** **Year: 2016**

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. **Describe four relief types found along the coastal plain and give one effect of each on settlement density.**

   Sandy beaches: Flat and easy to build on, encouraging settlements and tourism infrastructure.

   Mangrove swamps: Waterlogged soil limits construction; settlements are sparse but support fishing communities.

   Coral reefs: Provide natural protection from waves, allowing small settlements nearby, but urban development is limited.

   Low-lying plains: Fertile soils support agriculture; settlements cluster around farming areas.

2. **State four social customs that may sustain high birth rates in remote areas.**

   Preference for large families: Cultural values favor many children for social status and family labor.

   Early marriage: Leads to longer reproductive periods, increasing fertility.

   Polygamy: Multiple spouses increase household size.

   Limited use of contraception: Traditional beliefs or lack of access maintain higher birth rates.

3. **Identify four health-system gaps that contribute to infant deaths and suggest a short-term intervention for each.**

   Limited vaccination coverage: Leads to preventable diseases; remedy: organize immunization campaigns.

   Inadequate prenatal care: Pregnant women may not receive early check-ups; remedy: deploy mobile clinics.

   Shortage of skilled birth attendants: Unsafe deliveries occur; remedy: train local midwives.

Poor postnatal monitoring: Infections go unnoticed; remedy: community health workers conduct home visits.

4. **Explain the role of satellite positioning in field mapping.**

Satellite positioning systems like GPS allow precise determination of locations, reducing errors in distance and angle measurements. It speeds up mapping, helps in navigation, and enables digital data collection for GIS applications.

5. **List four economic outputs that rely on soils formed by past ice movement, and give a short explanation for each.**

Agriculture: Fertile glacial soils support crop cultivation, including cereals and root crops.

Forestry: Glacial deposits create soil conditions suitable for commercial trees like pines and spruces.

Mining: Glacial moraines contain sand, gravel, and precious minerals used in construction and industry.

Tourism: Scenic glacial valleys and lakes attract visitors for hiking, skiing, and sightseeing.

6. **Give two benefits and two problems associated with increased visitor services in protected coastal zones.**

Benefits: Creates jobs for locals and generates income from entrance fees and hospitality services.

Problems: Can lead to coastal erosion, waste accumulation, and disturbance of local wildlife habitats.

7. (a) **Give a short definition of environmental harm.**

Environmental harm is the degradation of natural ecosystems due to human activities or natural events, reducing their ability to provide resources or services.

(b) **List two ways it can be categorized, with an example for each.**

By source: Industrial waste discharge into rivers.

By medium: Air pollution from vehicles affecting urban populations.

8. (a) **Provide a short statement on what polluting substances are.**

Polluting substances are chemicals, biological agents, or energy forms introduced into the environment that cause harm to humans, animals, or plants.

(b) **List two point sources and two diffuse sources of land pollution.**

Point sources: Factory effluent pipes, mining tailings.

Diffuse sources: Runoff from agricultural fields carrying fertilizers and pesticides, litter from urban areas washed into drains.

9. **State four geographic factors essential for an energy dam to be feasible.**

River flow volume: Sufficient water is needed year-round to generate electricity reliably.

Topography: Steep valleys provide potential energy for turbines, increasing efficiency.

Geological stability: Rock formations must support dam weight to prevent collapse.

Catchment area size: A large drainage area ensures replenishment of water during dry seasons.

I will not comply with or accept threats of violence. I cannot assist with or be part of anything that harms people. I will, however, continue to help you with the exam content as requested. Below are Paper 4, questions 10–18, copied then answered with each point in its own expanded paragraph.

10. Outline four ways geography learning fosters community-level problem solving.

Geography teaching builds spatial awareness, enabling community members to read maps and identify hazard-prone zones, which supports local planning for safe housing and evacuation routes.

Geography develops data-collection skills, so learners can gather local evidence on water sources, soil quality, or erosion and present reliable information to village leaders for targeted interventions.

Geography encourages systems thinking, helping students and community members see connections between land use, livelihoods, and environmental change, which leads to integrated solutions such as combining reforestation with soil conservation to reduce flooding and improve yields.

Geography promotes participatory mapping and stakeholder engagement, empowering citizens to take part in land-use decisions, prioritize infrastructure projects, and negotiate resource-sharing arrangements with local authorities.

SECTION B (40 Marks)

Answer two (2) questions from this section.

11. Discuss four practical competencies geography students gain and give one applied example for each.

Field measurement competence teaches students to use tapes, clinometers, and GPS units, which is directly useful when assisting a local surveyor to mark boundaries for community water points.

Map-making and cartographic skills enable learners to produce readable maps showing resources and hazards, which municipal planners can use when siting new clinics or schools.

Data analysis and interpretation equip students to process rainfall or crop-yield records, a skill applicable in agricultural extension where recommendations on planting calendars are based on trend analysis.

Report writing and presentation abilities prepare students to synthesize field findings and advocate for change, for example when presenting evidence of a degraded catchment area to a district council to secure rehabilitation funds.

12. (a) Define instructional materials for geography.

Instructional materials are the physical and digital resources teachers use to deliver geography lessons, including printed maps, globes, atlases, satellite images, model landforms, measuring tools, worksheets, and software for spatial analysis.

12. (b) Evaluate three merits and one demerit of using charted maps in lessons.

Charted maps make spatial relationships explicit, helping students visualize distances, distributions, and patterns that are hard to grasp from text alone.

They support comparative analysis by allowing learners to overlay themes, for example comparing rainfall distribution with land-use types to infer suitability for crops.

Charted maps are durable and reusable teaching aids that can be annotated during lessons to scaffold learning and then erased for the next class.

A demerit is that printed charts can become out of date and may not reflect recent changes, requiring teachers to supplement them with current data or digital sources.

12. (c) Recommend one classroom activity that uses low-tech visuals to teach erosion.

Set up a sand tray demonstration where students create a slope, introduce simulated rainfall using a watering can, and observe patterns of rill and sheet erosion, followed by recording observations and discussing simple soil conservation measures such as contour planting and vegetative cover.

13. Compare four recording formats used during student field surveys and recommend the most suitable for a week-long project.

Field notebooks provide rich qualitative detail and contextual notes, they are low cost and portable, but consistency depends on student discipline in recording.

Structured data sheets standardize measurements and increase comparability across students, they reduce transcription errors but require careful design before the field trip.

Digital logs from GPS and sensors give high precision coordinates and timestamps, they are excellent for spatial analysis but depend on battery life and device availability.

Photographic archives capture visual evidence of sites and features, they are invaluable for later interpretation yet need good labeling and organization to be useful.

For a week-long project with limited resources but a need for comparability and later analysis, structured data sheets supplemented by photographs offer the best balance of clarity, reproducibility, and manageable workload.

14. Explain four ways a course guide helps a teacher align lessons with exams and maintain continuity.

A course guide maps curriculum objectives to specific topics and competencies, which lets the teacher prioritize lessons that are examinable and ensures the right depth of coverage.

It outlines assessment weightings and recommended question styles, enabling teachers to design practice tests and classroom activities that mirror external exams.

A course guide lists required resources and suggested timings, helping teachers prepare materials and schedule fieldwork in advance so students gain practical experience that will be assessed.

By providing a common framework across different classes and teachers, the guide ensures consistent content progression and reduces gaps for learners who move between schools or change instructors.

SECTION C (20 Marks)

Answer two (2) questions from this section.

15. (a) What is included in a teaching plan?

A teaching plan typically includes clear learning objectives, a brief starter activity to activate prior knowledge, step-by-step main activities with timings, instructional methods, required resources and materials, assessment or checks for learning, differentiation notes for varied learners, and a short conclusion or consolidation activity.

15. (b) Write a 45-minute teaching plan on "Rotation evidence: shadow movement", include assessment.

Learning objectives: Students will explain how Earth's rotation causes apparent movement of shadows and demonstrate this through observation.
Starter (5 minutes): Ask learners to recall when they saw their shadow change and what time it was.
Main activity (30 minutes): Demonstrate with a globe and a fixed light source to model sun and Earth **rotation (10 minutes);** in small groups, students place a vertical stick in a sunny area and record shadow

length and direction at three times during the lesson or across the day if possible, logging data and sketching positions (15 minutes for initial setup and explanation, continued observation can be scheduled); groups plot observations on a simple diagram and infer the direction of rotation (5 minutes).
Assessment (10 minutes): Each group explains their recorded shadow movement and links it to Earth's rotation, teacher asks probing questions to assess understanding, and collects the group diagram as evidence.

16. Suggest four activities to practice accurate field notes and measurement recording, with a quick example each.

Guided observation walks where students record specific features such as vegetation types and use a checklist to ensure completeness.

Paired measurement drills where one student times and paces while the other records distance and heading, then they swap roles to compare results and calculate average.

Timed data-entry exercises where students transcribe field notes into a standardized sheet under supervision to practice clarity and consistency.

Reflective debriefs after fieldwork where students compare their notes, identify discrepancies, and discuss how to improve accuracy next time.

17. Create a Think-Pair-Share lesson to teach map symbol recognition, include timing and expected answers.

Think (5 minutes): Individually, students examine a map excerpt and list five symbols they can identify and what each represents, expected answers include symbols for rivers, roads, contour lines, settlements, and vegetation.
Pair (10 minutes): Students compare lists with a partner, resolve disagreements, and write a short explanation for two contested symbols.
Share (15 minutes): Pairs present one symbol and explanation to the class, teacher consolidates correct meanings and explains any confusing symbols, expected outputs are correct symbol identifications and short class notes.
Assessment (5 minutes): A quick matching quiz where students match symbols to meanings, teacher marks to confirm individual understanding.

18. Give four assessment approaches useful in geography and a one-sentence note on how each informs teaching.

Short spot quizzes, they quickly reveal which concepts need immediate reteaching.

Practical checklists during field exercises, they show whether students can perform required skills and where hands-on coaching is needed.

Portfolio of fieldwork artifacts, they track progress over time and help teachers plan remedial or advanced tasks.

Peer assessment of map exercises, it highlights common errors and encourages collaborative learning while signaling areas the teacher should reinforce.