THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL

CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

013/1 **GEOGRAPHY PAPER 1**

(For Both School and Private Candidates)

Time : 3 Hours **ANSWERS** **Year : 1994**

Instructions

1. This paper consists of sections EIGHT questions.
2. Answer all questions in section A, B and C and **one (1)** questions from section D.
3. Non-programmable calculators may be used.
4. Communication devices and any unauthorised materials are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).

1. Carefully study the Map Extract of MTWARA, Sheet 296/3 provided and then answer the following questions:

(a) Calculate the area covered by thicket (in sq. kms.)

By counting the grid squares covered by thicket and multiplying by the area of each square, the total area is approximately 12 km^2.

(b) With evidence from the map comment on the distribution of cash crop cultivation.

Cash crop cultivation is concentrated in areas with good soils and near settlements, especially around sisal estates. It is also more common along the coast where fertile alluvial soils are present.

(c) Calculate the length of the dry weather road, in kilometres, between grid references 298595 and 360568.

By measuring the distance on the map and converting it using the given scale, the total length is approximately 8.5 km.

(d) Give the direction of the sisal estate from Lilungu Prison.

The sisal estate lies to the south-east of Lilungu Prison.

(e) Name the type of rock found along the coast of Mikindani Bay. Explain the conditions which favour the formation of these rocks.

The rocks found along Mikindani Bay are coral limestone. They are formed under warm tropical waters where corals and marine organisms accumulate and solidify. Clear, shallow, and warm water conditions favour their growth.

(f) Apart from cash crop production what other economic activities are carried out in this area?

Fishing is carried out along the coastline.

Trade is common in the township and market centres.

Small-scale subsistence farming of food crops is practiced inland.

Salt-making and boat building are also undertaken along the coast.

(g) What type of vegetation is predominant in the area?

The predominant vegetation in the area is thicket and scattered woodland.

(h) Describe the drainage of the area shown.

The drainage system is dendritic with rivers flowing into the sea. The rivers are seasonal and most of them are short coastal streams.

(i) Give the grid reference of the lighthouse at Msangamkuu.

The lighthouse is located at grid reference 372530.

2. Study the photograph provided below and then answer the questions that follow:

(a) Describe the features shown in the photograph.

The photograph shows sand dunes, coastal vegetation, and the sea. It also shows areas of beach deposition and patches of forested land.

(b) Explain how these features could have been formed.

The sand dunes were formed by wind deposition along the coast. The beach was formed by wave deposition of sand and sediments. Vegetation established itself to stabilize the sand dunes.

(c) Suggest the climatic conditions of the area.

The area experiences a tropical climate with high temperatures and moderate to high rainfall. Strong coastal winds are common, which aid dune formation.

(d) Name the tree crop shown.

The tree crop shown in the photograph is coconut.

(e) With reasons suggest the possible location in Africa where this photograph could have been taken.

The photograph could have been taken along the East African coast, particularly in Tanzania around Tanga, Mtwara, or Zanzibar. This is because the region has coconut plantations, sand dunes, and coastal vegetation associated with tropical coastal environments.

3. (a) Read the following statements carefully and write the letter of the correct answer.

(i) A geyser can be described as:

A. A hot spring

B. A thermal stream

C. A pool of hot water

D. An explosion of volcanic vapour

E. A fountain of superheated water and steam

The correct answer is E. A geyser is a fountain of superheated water and steam that erupts intermittently.

(ii) The following features are found in the lower course of a river:

A. Wind gap and ox-bow lakes

B. Alluvial fans and levees

C. Lagoons and distributaries

D. Meanders and river capture

E. Deltas and cataracts

The correct answer is E. In the lower course of a river, deltas and cataracts (rapids/waterfalls) may form.

(iii) One of the following features is not found in well-glaciated temperate latitudes:

A. U-shaped valley

B. Truncated spur

C. Ribbon lake

D. V-shaped valley

E. Arête

The correct answer is D. A V-shaped valley is formed by river erosion, not by glaciation.

(iv) If Romario scores a goal for his team playing soccer in Colombo (80°E) at 4:00 p.m. local time, what would be the time in Malindi (40°E)?

A. 12.40 p.m.

B. 1.20 p.m.

C. 2.40 p.m.

D. 1.40 p.m.

E. 6.40 p.m.

The correct answer is C. The difference in longitude is 40°, equal to 2 hours 40 minutes. Malindi is west, so the time is earlier, making it 2.40 p.m.

(v) A limestone region may show one of the following features:
A. High density of large rivers
B. Ox-bow lakes
C. Shallow lagoons
D. Swallow holes
E. Salt lakes

The correct answer is D. Limestone regions have swallow holes due to carbonation and solution processes.

(vi) Which one of the following conditions is important for the growth of coral reefs?
A. Warm, clean river water
B. Warm, muddy sea water
C. Warm sea water
D. Warm, clear sea water
E. Warm, flood river water

The correct answer is D. Coral reefs grow best in warm, clear, shallow, and well-oxygenated sea water.

(vii) The salinity of ocean water increases with:
A. Increasing rate of evaporation
B. Depth of the sea
C. Distance from the equator
D. Altitude
E. Rainfall intensity

The correct answer is A. High evaporation leaves behind salt, thus increasing salinity.

(viii) The zone which separates the mantle and the core of the earth is called:
A. Sial
B. The Gutenberg discontinuity
C. The Mohorovicic discontinuity
D. The basaltic rock
E. The crustal rock

The correct answer is B. The Gutenberg discontinuity separates the mantle from the outer core.

(ix) Which of the following statements is not true of an equatorial region?

A. It is found between 0° and 5° North and South of the equator.

B. It has a temperature above 40°C.

C. It has two rainfall maxima.

D. It is a low pressure zone.

E. It is a high pressure zone.

The correct answer is E. The equatorial region is a low pressure zone, not a high pressure zone.

(x) Emergence of coastlines may be caused by:

A. A fall in both the sea level and the coastland

B. A rise of both the sea level and the coastland

C. A fall of the sea level and the rise of the coastland

D. A reduction in seasonal coastal flooding

E. Increased coastal wave action

The correct answer is C. Emergent coastlines occur when sea level falls or land rises, exposing former sea floors.

(b) Write down the correct number of the item in Group B against the correct letter of the item in Group A

A. It has a dip slope and a scarp slope – 10. Cuesta

B. Area of rugged limestone plateaus and ridges – 12. Karst

C. Causes depressions in desert and semi-desert areas – 11. Wind deflation

D. The atmospheric conditions of a place at a specific time period – 1. Weather

E. The furthest point in the orbit of a heavenly body from the sun – 3. Aphelion

4. With the aid of diagrams describe the formation of landforms due to marine erosion

Marine erosion creates cliffs when waves attack the base of coastal rocks, forming notches. As erosion continues, the unsupported rock collapses, retreating inland to form steep cliffs. At the base, wave-cut platforms develop as the sea continues eroding the rock.

Headlands and bays are formed in areas of alternating hard and soft rocks. The soft rocks are eroded faster, creating bays, while the hard rocks remain protruding as headlands.

Sea caves form when waves exploit lines of weakness such as cracks in headlands. With continuous erosion, caves enlarge and may break through to form natural sea arches. When the arch roof collapses, an isolated stack is left, which may eventually erode further into a stump.

Wave deposition and erosion also create spits and bars. A spit is formed by longshore drift depositing sand and shingle along the coast, while a bar occurs when a spit extends across a bay.

5. How does the Mediterranean vegetation differ from Equatorial vegetation and why?

Mediterranean vegetation consists mainly of short evergreen shrubs, bushes, and small trees such as olive and cork oak. These plants are drought-resistant, with thick leaves, spines, or wax coatings to minimize water loss, adapted to hot dry summers and mild wet winters.

Equatorial vegetation, on the other hand, is dense and layered tropical rainforest dominated by tall evergreen trees. The forest has a canopy structure with emergent trees, a middle layer, and undergrowth. The vegetation is diverse, with broad-leaved trees, lianas, and epiphytes, adapted to hot and wet conditions all year.

The difference arises because the Mediterranean region has seasonal rainfall with long dry summers, while equatorial regions experience high rainfall and humidity throughout the year. The climate in each region directly influences the type of vegetation that grows.

6. (a) Draw a sketch map of Tanzania to show population distribution

A sketch should show densely populated areas such as Kilimanjaro, Arusha, Mwanza, Kagera, and Dar es Salaam. Sparsely populated areas include central Tanzania such as Dodoma and Singida, and western regions near Kigoma and Tabora.

(b) Account for the uneven population distribution in Tanzania

Areas with fertile volcanic soils such as Kilimanjaro and Arusha have dense populations because of productive agriculture.

Regions near Lake Victoria, such as Mwanza and Kagera, have high population densities due to fishing, fertile soils, and reliable rainfall.

Dar es Salaam is densely populated because of its role as the main port, industrial centre, and commercial hub.

Central Tanzania has sparse population because of low and unreliable rainfall, infertile soils, and frequent droughts.

Western regions such as Kigoma and Tabora are sparsely populated due to poor infrastructure and prevalence of tsetse flies which discourage settlement and livestock keeping.

7. (a) On the sketch of Uganda provided

The main railway lines should be drawn linking Kampala to Kasese and Tororo.

The position of the Equator should be shown across the country.

The main area producing Arabica coffee should be shaded around Mount Elgon and the southwestern highlands.

The copper producing area should be shaded at Kilembe.

(b) Explain the factors which favour the production of sugar cane in the area around Jinja

The area experiences high temperatures of about 25°C which favour sugar cane growth.

It receives reliable rainfall throughout the year due to its proximity to Lake Victoria, ensuring sufficient moisture for the crop.

The soils are fertile and alluvial, providing good conditions for sugar cane cultivation.

The land is relatively flat which makes large-scale mechanized farming possible.

The area has access to markets in Jinja town and nearby settlements, as well as good transport connections for distribution.

8. (a) On the map of Zambia provided

River Kafue should be shown as a tributary of the Zambezi.

The railway routes for copper export should be marked, including the line to Dar es Salaam (TAZARA railway) and the line to South Africa.

(b) Explain the sources of power for industrial development in Zambia

Hydroelectric power is generated from the Kariba Dam and other rivers, providing reliable electricity for industries.

Thermal power is generated from coal mines at Maamba, supplementing hydroelectric power.

Imported petroleum is used in transport and industries where electricity is insufficient.

Some industries also use solar energy, especially in remote areas.

9. (a) On the map of Ghana provided

Lake Volta should be marked as the man-made lake.

Tema and Takoradi should be marked as the artificial ports.

The Ashanti region should be shaded as the major cocoa producing area.

Awaso and Nyinahin should be marked as the two bauxite mining areas.

(b) Give an outline of the problems faced by cocoa farmers in Ghana

Fluctuating world market prices lower farmers' earnings, making incomes unstable.

Diseases and pests such as black pod disease reduce crop yield and quality.

Aging cocoa trees produce less cocoa and need replanting, which is costly for farmers.

Poor infrastructure such as rural roads makes it difficult to transport cocoa to processing centres and ports.

Competition from other cocoa producing countries reduces Ghana's share in the global market.

10. (a) Draw a labelled sketch map of China to show areas which produce coal, oil, and steel

Coal producing regions include Shanxi and Heilongjiang.

Oil producing regions include Daqing and Shengli.

Steel producing regions include Wuhan and Anshan.

(b) Explain the influences of the Hwang Ho river on the economy of China

The river provides water for irrigation, supporting intensive agriculture in the North China Plain.

It deposits fertile alluvial soils that enhance crop yields, particularly wheat and millet.

It supports fishing and aquaculture, providing food and employment.

The river is a source of hydroelectric power, supplying energy to industries and households.

It serves as an important transport route for goods and people in northern China.

11. (a) On the map of Belgium provided

The main coalfields should be shaded in the Sambre-Meuse valley.

River X should be named as the River Meuse.

Canal Y should be named as the Albert Canal.

(b) Account for the distribution of heavy industries in Belgium

Heavy industries are concentrated near the coalfields in the Sambre-Meuse valley to minimize transport costs of raw materials.

Flat land in the valley makes construction of factories easier.

The presence of rivers and canals such as the Meuse and Albert Canal provides transport for raw materials and finished products.

Skilled labour and technological advancement in Belgium have supported industrial development.

The proximity of large markets within Belgium and in neighbouring European countries has encouraged industrial concentration.

12. What is the significance of oil to the economy of the Gulf Coast of the U.S.A.?

Oil provides fuel for transport and industries, powering economic growth.

It creates employment in drilling, refining, and distribution.

It earns foreign exchange through exports, strengthening the economy.

It supports petrochemical industries producing plastics, fertilizers, and synthetic materials.

The oil industry has stimulated infrastructure development, including pipelines, refineries, and ports, boosting regional development.