THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL

CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

013 **GEOGRAPHY**

For Private Candidates only

Time: 3 Hours **ANSWERS** **Year: 2014**

Instructions

1. This paper consists of ELEVEN questions.

2. Answer all questions in section A and B and two questions from section C.

1. For each of the items (i) - (x), choose the correct answer from among the given alternatives and write its letter beside the item number in the answer booklet provided.

(i) The movement of the earth around the sun in a period of 365¼ days is known as
A the lunar eclipse
B the solar eclipse
C revolution
D rotation
E elliptical orbit

Correct answer: C revolution
Reason: Revolution is the earth's yearly movement around the sun, taking approximately 365¼ days.

(ii) The erosional power of a strong wind is reduced where soil is
A bare
B dry
C damp
D fertile
E shallow

Correct answer: C damp
Reason: Damp soil binds particles together, making it difficult for the wind to blow them away.

(iii) Which of the following features is produced by wave deposition?
A cave
B beach
C arch
D blow hole
E stack

Correct answer: B beach
Reason: Beaches are formed by the deposition of sediments by waves along the coast.

(iv) An overhead sun occurs on the Tropic of Cancer at
A 21st June
B 21st March
C 22nd December
D 23rd September
E 23rd June

Correct answer: A 21st June
Reason: On 21st June, the sun is directly overhead at the Tropic of Cancer during the summer solstice.

(v) A climate characterised by heavy rainfall, low pressure and small annual range of temperature is known as
A Tundra
B Mediterranean
C Tropical
D Equatorial
E Hot Desert

Correct answer: D Equatorial
Reason: Equatorial climate has heavy rainfall throughout the year, high humidity, and minimal temperature variation.

(vi) Soil erosion can be prevented by
A bush fire
B shifting cultivation
C cultivating down slope
D cutting trees
E contour ploughing

Correct answer: E contour ploughing
Reason: Contour ploughing reduces runoff and soil erosion by following the natural contour lines of the land.

(vii) Crag and tail are erosional features in
A glaciated high land
B glaciated low land
C the desert
D the sea
E the river

Correct answer: A glaciated high land
Reason: Crag and tail features are formed by glacial erosion in upland regions where resistant rocks form the crag and softer rocks form the tail.

(viii) The difference between high tide and low tide is known as
A tidal range
B spring tide
C neap tide
D bore
E ocean current

Correct answer: A tidal range
Reason: Tidal range is the vertical difference between the high tide and low tide levels.

(ix) The sun's energy is known as
A radiation
B insolation
C reflection
D conduction
E convection

Correct answer: B insolation
Reason: Insolation is the solar radiation energy received on a given surface area during a given time.

(x) If the time at Mombasa 15°E is 12:00 noon, what will be the time of Benin which is 45°W?
A 02:00 am
B 08:00 pm
C 03:00 pm
D 06:00 am
E 08:00 am

Correct answer: A 02:00 am
Reason: The difference in longitude is 60°. 60° × 4 minutes = 240 minutes = 4 hours. Mombasa is ahead, so Benin is 4 hours behind → 12:00 noon - 4 hrs = 8:00 am UTC → Benin = 2:00 am.

2. Match the items in List A with the responses in List B by writing the letter of the correct response beside the item number in the answer booklet provided.

(i) Narrow valleys with very steep sides.
Answer: F V-shaped valley

(ii) Occurs when waterfall retreats upstream.
Answer: H Waterfall

(iii) Larger depressions formed at the base of a waterfall.
Answer: I Plunge pools

(iv) Develops along the front of delta.
Answer: A Spits

(v) The feature which represents the presence of flood plain.
Answer: B Seasonal floods
3. (a) Define the term lake.
A lake is a large inland body of standing water occupying a depression on the earth's surface, which may be natural or artificial, and is usually surrounded by land.

(b) Explain eight benefits of lakes to human beings.
Lakes provide freshwater for domestic use such as drinking, cooking, and washing, especially in rural and peri-urban areas.

They are sources of fish and other aquatic food resources, supporting both subsistence and commercial fishing activities.

Lakes support agriculture through irrigation. Water is pumped from lakes to irrigate crops, especially in dry regions.

They facilitate transport and communication. In large lakes, ferries and boats are used to move people and goods across regions.

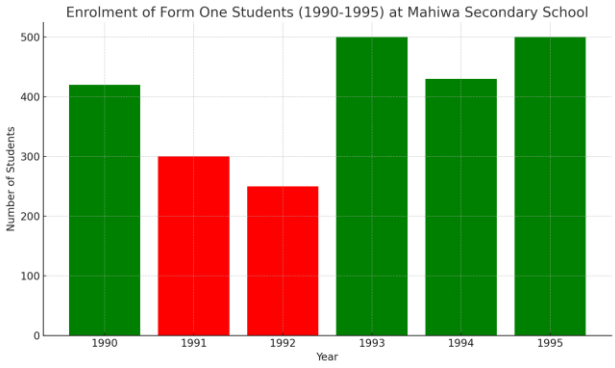
Lakes attract tourism. Scenic lakes such as Lake Victoria attract tourists, boosting local and national economies.

They provide employment opportunities in sectors like fishing, tourism, transportation, and water management.

Lakes act as reservoirs for hydroelectric power generation. Dams built on lakes help produce electricity for domestic and industrial use.

Lakes influence local climate by moderating temperatures and increasing humidity, creating favorable conditions for agriculture.

4. (a) Present the data by using divergent bar graph.



(b) Name three alternative methods of presenting the same data.
Line graph
Pie chart
Histogram
5. (a) Briefly describe the following concepts as used in research.
(i) Participant observation: This is a data collection method in which the researcher becomes actively involved in the group or setting being studied while observing behaviors or practices.

(ii) Non-participant observation: This is when the researcher observes the group without becoming involved or interacting with the subjects directly.

(b) Explain the shortcomings of using questionnaires.
Some respondents may not understand questions clearly, leading to inaccurate responses.
Low response rate may occur if people are unwilling or unable to complete the questionnaire.
There's no opportunity to probe further for detailed responses.
Respondents may provide socially desirable answers rather than honest opinions.

6. (a) Differentiate forward bearing from back bearing.
Forward bearing is the compass direction from the starting point to the destination.
Back bearing is the compass direction from the destination back to the starting point.

(b) Identify four advantages and three disadvantages of prismatic compass survey.

Advantages:
It is portable and easy to carry in the field.
Provides quick and direct readings of bearings.
Does not require elaborate setup like plane table.
Can be used even in rough or uneven terrain.

Disadvantages:
It is affected by local magnetic attraction such as metal or power lines.
It has limited accuracy compared to advanced instruments.
Cannot be used effectively in dense forests or bad weather due to poor visibility.

7. Study the map extract of Mpwapwa (sheet 163/4), then answer the following questions:

(a) Calculate the area covered by the map in km² by using grid square method.
The map extract uses a scale of 1:50,000, and each full grid square represents an area of 1 km × 1 km = 1 km².
Counting the full grid squares on the map gives approximately 48 full squares and 4 half-squares.
So, total area = 48 + (4 × 0.5) = 50 km².

(b) Describe the vegetation distribution of the area.
The map shows various types of vegetation. Scattered trees dominate the central and western parts of the map, indicating savannah vegetation.
Woodland is mostly found in the southern areas where there's denser vegetation.
There is also evidence of seasonal swamps and thicket along drainage lines and valleys.
Generally, vegetation is distributed unevenly, with denser vegetation in lowlands and sparse vegetation in elevated and settled areas.

(c) Measure the distance of all weather loose surface road in kilometres from grid reference 138865 to 210966.
Measure the curved line with a thread or string, then convert the measured map length to ground distance using the RF scale of 1:50,000.
Assuming the curved distance on the map is approximately 13.6 cm:
13.6 cm × 0.5 km/cm = 6.8 km.

(d) What is the direction of Mpwapwa town from Gulwe?
Using the map, Mpwapwa town lies to the northeast of Gulwe.
Direction = North-East (NE)

(e) Comment on the population distribution of the area.
Population is unevenly distributed. Mpwapwa town and surrounding areas show dense settlements indicating higher population concentration.
The northwestern and southern parts of the map show sparse population due to forests and hilly terrain.
Villages are mainly found along roads and valleys, suggesting that transport and water sources influence settlement patterns.

(f) With vivid evidence from the map, identify three major economic activities taking place in the area.
Agriculture – evident from the widespread cultivation marks and rural settlements such as Mpwapwa and Gulwe.
Transportation – the presence of an all-weather road and railway indicates active movement of goods and people.
Forestry – the southern part is covered with dense forest, suggesting logging or forest conservation as an activity.

8. (a) Briefly explain two types of oblique photographs.
High oblique photograph – taken from an angle above the ground showing the horizon and wide coverage of land features.
Low oblique photograph – taken from a slightly lower angle, does not show the horizon and covers a smaller area.

(b) Describe four differences between oblique photographs and ground level photographs.
Oblique photographs are taken from an elevated position while ground level are taken from the ground.
Oblique covers a wider area; ground level covers a narrow and close view.
Oblique may show the horizon; ground level does not.
Oblique is suitable for surveying large features; ground level is good for close analysis of objects or people.

(c) Explain four similarities between maps and photographs.
Both represent real-world features.
Both can be used to interpret land use and human activities.
Both may show physical and human-made features.
Both are tools for geographical field studies and interpretation.

9. Examine the problems of harnessing Hydro-Electric Power in East Africa.
High initial capital cost limits the number of projects that can be implemented.
Seasonal rivers and low rainfall in some regions lead to insufficient water for generation.
Siltation of dams due to erosion reduces efficiency and lifespan of turbines.
Evaporation from reservoirs reduces water levels, affecting energy output.
Displacement of people during dam construction causes social and economic disruption.
Environmental degradation like loss of biodiversity occurs due to damming rivers.
Technical expertise and maintenance cost are high and often unaffordable.
Political disputes over shared water resources cause conflicts and delays in joint projects.

10. Analyze eight limitations of large scale crops farming in Tanzania.
High cost of machinery, fertilizers, and irrigation makes it inaccessible to many.
Poor infrastructure leads to difficulty in transporting inputs and outputs.
Pests and diseases affect large monoculture plantations significantly.
Unreliable rainfall and droughts lead to crop failure and low yield.
Shortage of skilled labor limits management and productivity.
Land conflicts arise due to displacement of small-scale farmers.
Poor access to capital and loans limits expansion and investment.
Fluctuation of market prices causes financial instability.

11. (a) Describe five characteristics of human population.
Population size – refers to the total number of people in an area.
Population density – shows how many people occupy a unit area of land.
Population distribution – the spatial arrangement of people in a region.
Age structure – indicates the proportion of different age groups.
Sex ratio – compares the number of males to females.

(b) Explain any three goals of the Tanzania's National Population Policy.
To improve the quality of life of Tanzanians through balanced population and resources.
To reduce high fertility rate through access to family planning.
To promote education and employment, especially among women and youth.

12. Explain eight factors that favour the development of tourism industry in Tanzania.
Abundant wildlife and national parks attract international tourists.

Diverse landscapes including mountains, beaches, and lakes offer scenic beauty.

Cultural heritage and historical sites provide unique experiences.

Peace and political stability make the country a safe tourist destination.

Government support through policies and investment in tourism infrastructure.

Improved transport and communication facilitate tourist movement.

International cooperation and promotion enhance visibility abroad.

Hospitality and friendliness of local people create a welcoming environment.