

**THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATION COUNCIL OF TANZANIA
FORM TWO NATIONAL ASSESSMENT**

013

GEOGRAPHY

Time: 2:30 Hours

ANSWERS

Year: 2023.

Instructions

1. This paper consists of sections A, B, and C.
2. Answer **all** questions in the spaces provided.
3. Section A and C carry **fifteen (15)** marks each and section B carries **seventy (70)** marks.
4. All writings must be in **blue** or **black** ink.
5. Communication devices and any unauthorized materials are **not** allowed in the assessment room.
6. Write your **Assessment Number** at the top right hand corner of every page.

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

(i) What happens when the Earth passes between the moon and the sun?

A Solar eclipse

B Lunar eclipse

C Revolution

D Rotation

Answer: B Lunar eclipse

Reason: A lunar eclipse occurs when the Earth passes between the moon and the sun, blocking the sunlight from reaching the moon. A solar eclipse (A) happens when the moon passes between the Earth and the sun. Revolution (C) and rotation (D) are regular planetary motions that do not describe this specific event.

(ii) A Form One Geography teacher asked students to plan for a trip to the smallest continent. Which continent are they intending to visit?

A Europe

B Australia

C North America

D Antarctica

Answer: B Australia

Reason: Australia is the smallest continent in terms of land area. Europe (A), North America (C), and Antarctica (D) are significantly larger.

(iii) Suzan was told by her grandfather that they can turn their degraded land into a useful agricultural land. Identify the suitable techniques that Suzan's grandfather would use to improve the land.

A Afforestation and draining

B Drainage and overgrazing

C Afforestation and overgrazing

D Overgrazing and planting cover crop

Answer: A Afforestation and draining

Reason: Afforestation (planting trees) helps restore degraded land, and draining removes excess water that can harm soil quality. Overgrazing (B, C, D) is a harmful practice that depletes land productivity. Planting cover crops (D) is helpful but not as effective as afforestation combined with draining.

(iv) Which type of transport is not affected by the physical barriers?

A Land transport

B Road transport

C Air transport

D Pipeline transport

Answer: C Air transport

Reason: Air transport is not affected by physical barriers because it operates above the Earth's surface. Land transport (A) and road transport (B) are limited by mountains, rivers, and other obstacles. Pipeline transport (D) requires specific routes and is subject to physical challenges.

(v) Baina's farm is located in the South West of Kwetu Secondary School. Identify the correct bearing of that farm from the school.

A 22.5°

B 225°

C 112.5°

D 180°

Answer: B 225°

Reason: Bearings are measured clockwise from the north. The southwest direction corresponds to 225° . 22.5° (A) is northeast, 112.5° (C) is southeast, and 180° (D) is directly south.

(vi) Form Two students from Micheweni Secondary School visited different historical sites found in Bagamoyo. Identify the type of tourism they were involved in.

A Cultural tourism

B International tourism

C Eco-tourism

D Domestic tourism

Answer: A Cultural tourism

Reason: Cultural tourism involves visiting places of historical and cultural significance, like Bagamoyo. International tourism (B) relates to tourists from outside the country. Eco-tourism (C) focuses on natural attractions, and domestic tourism (D) refers to local tourists within the same country.

(vii) Joe had a chance to observe the mountains which have been formed by land uplifting in Asia. Which process caused the formation of those mountains?

A Breaking of the earth's rocks

B Wrinkling of the earth's crust

C Piling up and cooling of rocks

D Faulting of the earth's crust

Answer: B Wrinkling of the earth's crust

Reason: Wrinkling of the earth's crust occurs when land is uplifted due to tectonic plate movements, forming fold mountains. Breaking of rocks (A) refers to erosion or weathering. Cooling of rocks (C) forms igneous rocks, not mountains. Faulting (D) creates rift valleys, not fold mountains.

(viii) Ole Saitoti moves with his livestock from one area to another looking for pasture and water. In which category can Ole Saitoti be classified?

A Semi-nomad

B Pastoralist

C Cultivator

D Nomad

Answer: D Nomad

Reason: A nomad moves continuously in search of resources like pasture and water. Semi-nomads (A) settle for part of the year. Pastoralists (B) focus on livestock but may have permanent settlements. Cultivators (C) engage in farming.

(ix) Water is very important for the social and economic life of the societies living along Rufiji river. Identify the social economic uses of water in such area.

- A Domestic and industrial
- B Industrial and irrigation
- C Washing and bathing
- D Irrigation and navigation

Answer: D Irrigation and navigation

Reason: Water from the Rufiji River is crucial for agriculture (irrigation) and transportation (navigation). Domestic and industrial uses (A) are also important but not as specific. Washing and bathing (C) are minor uses compared to the listed options.

(x) Form One students at Mtakuja Secondary School visited the area near Indian Ocean. Which type of forest they could have seen in the located area?

- A Mangrove forest
- B Deciduous forest
- C Tropical Rainforest
- D Tropical monsoon forest

Answer: A Mangrove forest

Reason: Mangrove forests are commonly found along coastal regions near the Indian Ocean. Deciduous forests (B) are found in temperate regions. Tropical rainforests (C) are dense inland forests, and tropical monsoon forests (D) are not typically located along coastlines.

2. Match the descriptions of power production in List A with their corresponding types of power in List B by writing the letter of correct response below the item number in the table provided.

List A:

- (i) The power generated from waterfalls.
- (ii) The power tapped from sea waves.
- (iii) The energy extracted from hot springs.
- (iv) The type of power extracted from the uranium.
- (v) The type of power extracted from the sun's heat.

List B:

- A Solar energy
- B Nuclear power
- C Geothermal power
- D Hydroelectric power
- E Wind energy

- F Wave energy
- G Tide energy

Answers:

- (i) D Hydroelectric power
- (ii) F Wave energy
- (iii) C Geothermal power
- (iv) B Nuclear power
- (v) A Solar energy

3. King'oto village is surrounded by mountains. Most of its rainfall originates from those mountains.

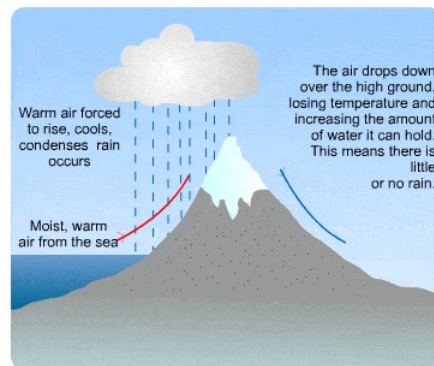
(a) Name the possible type of rainfall in King'oto village.

The possible type of rainfall in King'oto village is orographic rainfall (relief rainfall).

(b) Describe the type of rainfall named in (a).

Orographic rainfall occurs when moist air is forced to rise as it passes over a mountain. As the air rises, it cools and condenses, forming clouds and causing precipitation on the windward side of the mountain. The leeward side, however, receives little to no rainfall and is often referred to as the rain shadow area.

(c) Illustrate the type of rainfall in King'oto village by using a well-labeled diagram.



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4. Mwamvuwa is living in Musoma (33°E) and had to make a call to John at 5:00 pm who is living in Mexico City (80°W).

(a) Calculate the local mean time for John's location.

The difference in longitude between Musoma (33°E) and Mexico City (80°W) is $33^\circ + 80^\circ = 113^\circ$.

Every 15° represents one hour, so $113^\circ \div 15^\circ = 7$ hours and 32 minutes.

Since Musoma is east of Mexico City, we subtract 7 hours and 32 minutes from 5:00 pm Musoma time.

John's local mean time will be 9:28 am.

(b) What will be the local mean time at John's location if Mwamvuwa was living in Washington (96°W)?
The difference in longitude between Washington (96°W) and Mexico City (80°W) is $96^\circ - 80^\circ = 16^\circ$.
Every 15° represents one hour, so $16^\circ \div 15^\circ = 1$ hour and 4 minutes.

Since Washington is west of Mexico City, John's local mean time will be 1 hour and 4 minutes ahead of Washington's time.

If it is 5:00 pm in Washington, John's local mean time will be ****6:04 pm****.

5. You have been invited in Zanzibar to assist in the exploration of a liquid energy mineral used for running automobiles, machines, and engines.

(a) Identify that mineral.

The mineral is petroleum (crude oil).

(b) Outline two possible environmental problems caused by the extraction of the mineral named in (a).

(i) Oil spills leading to water and soil pollution.

(ii) Destruction of ecosystems and habitats due to drilling activities.

(c) Suggest three ways to reduce the environmental problems caused by the extraction of the minerals named in (a).

(i) Use advanced technology to prevent oil spills during extraction and transportation.

(ii) Restore affected ecosystems through reforestation and conservation programs.

(iii) Ensure strict regulations and monitoring of drilling activities to minimize environmental damage.

6. Form Two students of Kioja Secondary School visited an industry which deals with spinning and weaving of cotton and wool.

(a) Identify the type of industry visited by the students.

The type of industry visited by the students is the textile industry.

(b) Describe three possible pollutants produced by the industry named in (a).

(i) Chemical waste from dyes and detergents used in fabric processing.

(ii) Air pollution from textile machinery and boilers emitting smoke and dust.

(iii) Water pollution caused by the disposal of untreated wastewater into nearby water bodies.

(c) Examine three factors for the location of the industry named in (a).

(i) Proximity to raw materials like cotton and wool to reduce transportation costs.

(ii) Availability of a skilled workforce to operate machinery and manage production.

(iii) Access to markets for the distribution and sale of finished textile products.

7. You were given a task to write a report on an economic activity of rearing livestock and poultry for food and commercial purposes:

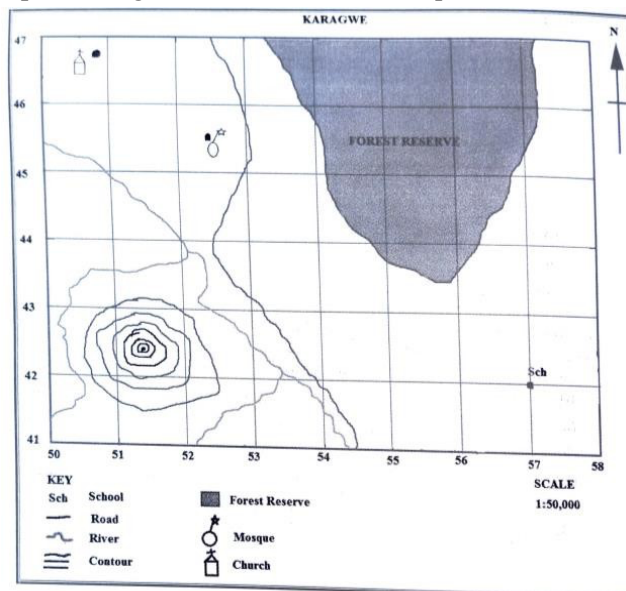
(a) Briefly explain four challenges facing that economic activity in Tanzania.

- (i) Lack of adequate veterinary services leading to disease outbreaks among livestock and poultry.
- (ii) Poor infrastructure, such as roads, hindering the transportation of products to markets.
- (iii) Inadequate access to water and feed, especially in arid and semi-arid regions.
- (iv) Limited knowledge of modern farming techniques among small-scale farmers.

(b) Describe four similarities in conducting that activity in Tanzania and Australia.

- (i) Both countries rear livestock and poultry for domestic consumption and export.
- (ii) Both rely on natural grazing pastures and supplemental feeds.
- (iii) Livestock rearing contributes significantly to the economies of both countries through income generation and employment.
- (iv) Both face challenges such as climate variability and disease management.

8. Study the sketch map of Karagwe and then answer the questions that follow:



(a) By using grid reference, locate the position of the following features:

(i) A school

The school is located at 57, 43

(ii) A mosque

The mosque is located at 53, 46.

(iii) A church

The church is located at 52, 45.

(b) Name four essentials of the map that have been used to draw that sketch map.

- (i) Scale – to show the proportionate size of the map to the real area.
- (ii) Key or legend – to explain the symbols used on the map.
- (iii) Compass direction – to indicate the orientation of the map (north direction).
- (iv) Grid system – to provide reference points for locating features.

- (c) Identify three methods which can be used to locate positions of features on that sketch map.
 - (i) Using grid references (easting and northing coordinates).
 - (ii) Measuring distances with a ruler and converting using the map's scale.
 - (iii) Using landmarks or symbols identified on the map key.

9. Read the weather data of Greenland and answer the questions that follow:

MONTH	J	F	M	A	M	J	J	A	S	O	N	D
Temp(°C)	-18.9	-17.2	-10.6	0.5	10.5	16.7	19.4	16.1	10	1.7	-8.9	-15.6
Rain(Mm)	7.6	5	7.6	10.2	25.4	35.6	45.6	40.6	22.9	22.9	17.8	15.2

(a) Identify the type of the climate for the given area.

The type of climate for the given area is tundra climate.

(b) Describe two characteristics of the type of the climate identified in (a).

- (i) The tundra climate is characterized by extremely low temperatures, often below freezing for most of the year, with short, mild summers.
- (ii) It has low precipitation levels, mainly in the form of snow, with limited rainfall during the warmer months.

(c) With examples, describe three possible activities which might take place in an area with the type of climate you mentioned in (a).

- (i) Hunting and fishing: Indigenous communities rely on hunting seals and fishing as primary sources of food and livelihood.
- (ii) Tourism: Activities such as glacier tours and viewing the Northern Lights attract visitors to areas with tundra climates.
- (iii) Scientific research: The harsh environment serves as a unique location for climate and wildlife studies.

10. The Earth has two kinds of movements which cause changes on the Earth's surface. Describe four effects for each type of those movements.

Essay: Movements of the Earth and Their Effects

Definition of Keywords

Earth's movements refer to the rotation and revolution that the Earth undergoes, leading to various phenomena and changes on its surface.

1. Rotation

Rotation is the spinning of the Earth on its axis. It takes approximately 24 hours to complete one rotation, leading to several effects on the Earth's surface.

Effects:

- (i) Day and night: The rotation causes different parts of the Earth to face the sun, creating day and night cycles.
- (ii) Time zones: The division of the Earth into time zones is a result of its rotation.
- (iii) Deflection of winds and ocean currents: The Coriolis effect, caused by rotation, influences the direction of wind and ocean currents.
- (iv) Apparent movement of stars: Stars appear to move across the night sky due to the Earth's rotation.

2. Revolution

Revolution is the Earth's orbit around the sun, taking approximately 365.25 days to complete one cycle. This movement causes various seasonal and climatic effects.

Effects:

- (i) Seasons: The tilt of the Earth's axis and its revolution lead to the occurrence of seasons.
- (ii) Variation in day length: The length of days and nights changes throughout the year due to revolution.
- (iii) Solar intensity variation: Different parts of the Earth receive varying amounts of sunlight during the year, influencing temperature.
- (iv) Migration patterns: Many animals and birds migrate in response to seasonal changes caused by the Earth's revolution.

In conclusion, the Earth's rotation and revolution are fundamental to life, shaping time, weather, and ecological processes on the planet.