THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL OF TANZANIA

FORM TWO SECONDARY EDUCATION EXAMINATION

0013 GEOGRAPHY

Time: 2:30 Hours **ANSWERS** **Wednesday, 26th November 2014**

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)** mark s.
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 and the right its letter in the boxing provided

(i) Which among the following causes deflection of winds and ocean currents?
A. Revolution
B. Rotation
C. Sunrise
D. Eclipse
Answer: B. Rotation
The Earth's rotation causes the Coriolis effect, which deflects winds and ocean currents.

(ii) Which among the following are the Earth's movements?
A. Rotation during day and night
B. Revolution during the day and night
C. Revolution around the sun and rotation on its axis
D. Revolution around the sun
Answer: C. Revolution around the sun and rotation on its axis
The Earth rotates on its axis and revolves around the sun, which are its two major movements.

(iii) Sea breeze is formed when wind blows from:
A. Land to sea
B. Sea to land
C. Sea to sea
D. Land to land
Answer: B. Sea to land
During the day, land heats up faster than the sea, causing wind to blow from the cooler sea to the warmer land.

(iv) Dar es Salaam at sea level has a temperature of 32°C. What will be the temperature in Arusha, 1500 meters above sea level?
A. 3.2°C
B. 23°C
C. 17°C
D. 0.6°C
Answer: B. 23°C
Temperature decreases by 6.5°C per 1000 meters of altitude. At 1500 meters, the decrease is approximately 9.75°C.

(v) The natural gas mining site in Tanzania is located in:
A. Mwadui
B. Mererani
C. Geita
D. Songosongo

Answer: D. Songosongo
The Songosongo islands are known for their natural gas reserves.

(vi) Which among the following is the compass bearing of North?
A. 90°
B. 180°
C. 0°
D. 45°
Answer: C. 0°
North is represented as 0° in compass bearings.

(vii) The dominant climatic condition of East Africa is known as:
A. Tropical grasslands
B. Mediterranean
C. Desert
D. Equatorial
Answer: A. Tropical grasslands
Most of East Africa experiences a tropical grassland (savanna) climate.

(viii) Contours are lines drawn on the maps to join places with the same:
A. Height between mountains
B. Altitude above sea level
C. Area between valleys
D. Features in mountains
Answer: B. Altitude above sea level
Contours connect points of equal elevation on maps.

(ix) The keeping of livestock on an extensive land without grazing is called:
A. Pastoralism
B. Nomadism
C. Ranching
D. Farming
Answer: C. Ranching
Ranching involves raising livestock on large areas of land where they graze freely.

(x) Hydro-electrical power is produced by the force of:
A. Water
B. Moving water
C. Large volume of water
D. Constant water
Answer: B. Moving water
Hydropower is generated when moving water drives turbines.

2. Match each item in List A with a correct response in List B by writing its letter below the number of the corresponding items in the table provided.

List A

(i) Continuous flat land not rising much above sea level.
(ii) Land that is completely surrounded by water.
(iii) Major land mass rising from the ocean floor.
(iv) Land with extensive high altitude with more or less uniform summit.
(v) Feature formed by wrinkling of the earth's crust.
(vi) Feature formed when small channels join together to form larger streams of river.
(vii) Major water mass on the earth's surface.
(viii) Feature with a narrow and steep sided valley in the ocean floor.
(ix) Land form with natural or artificial depression on the earth's surface.
(x) Feature with a long and narrow depression formed by the sinking of a block of land between two or less parallel faults.

List B

A. Plateau
B. Rift valley
C. Valley
D. Island
E. Ocean ridge
F. Plain
G. Continent
H. Fold Mountains
I. Basin
J. Ocean trench
K. Escarpment
L. Tributaries
M. Residue mountains
N. Escarpment
O. Distributaries

Answers.

(i) F. Plain
(ii) D. Island
(iii) G. Continent
(iv) A. Plateau
(v) H. Fold Mountains
(vi) L. Tributaries
(vii) G. Continent
(viii) J. Ocean trench
(ix) I. Basin
(x) B. Rift valley

3. Write True or False for itchy of the following statements write it true if the statement is correct or false if the statement is not correct

(i) Mining activities can destroy the environment. TRUE
(ii) Asteroids revolve around the sun. TRUE
(iii) Cyclonic rainfall is most common in highlands region. TRUE
(iv) Good railway and road network stimulate trade and commerce. TRUE
(v) Mount Elgon, The Himalayas, and Ruwenzori ranges are good examples of volcanic mountains. FALSE
(vi) Sedentary livestock keepers keep a large number of cattle. TRUE
(vii) Alluvial mining involves extracting minerals which usually occur close to the Earth's surface. TRUE
(viii) Elements of weather are the same as elements of climate. FALSE
(ix) Pipeline transport is essential for transporting people. FALSE
(x) Market is not a necessary factor for locating a manufacturing industry. FALSE

4. (a) Mention five essentials of a good map.

(i) Title
Provides a brief description of the map's content or the area it represents, helping users understand its purpose.

(ii) Scale
Indicates the relationship between distances on the map and actual distances on the ground, allowing users to measure real-world distances accurately.

(iii) Legend (Key)
Explains the meaning of symbols, colors, and lines used on the map, enabling users to interpret the information correctly.

(iv) Compass Rose (North Arrow)
Shows the orientation of the map by indicating directions (north, south, east, west), assisting users in navigation.

(v) Grid and Index
Provides a reference system, such as latitude and longitude or alphanumeric coordinates, to help users locate specific places on the map.

(b) Describe five steps involved in calculating an area of a lake by using grid square method on the map.

(i) Overlay a Grid on the Map
Place a transparent grid with known dimensions over the map area containing the lake.

(ii) Count Full Squares
Tally the number of complete grid squares that fall entirely within the lake's boundaries.

(iii) Estimate Partial Squares
For grid squares that are partially covered by the lake, estimate the fraction of each square that is occupied and sum these fractions to get an equivalent number of full squares.

(iv) Calculate Total Number of Squares
Add the number of full squares to the equivalent number of full squares obtained from partial squares.

(v) Compute the Area
Multiply the total number of squares by the area represented by each square (determined by the map's scale) to obtain the lake's approximate area.

(c) Name three human activities which can be influenced by climate of an area.

(i) Agriculture
Climate determines the types of crops that can be grown and the timing of planting and harvesting seasons.

(ii) Tourism
Weather patterns influence tourist activities; for example, sunny climates attract beachgoers, while snowy regions attract skiers.

(iii) Construction
Climate affects building designs and construction schedules, as extreme weather conditions can delay projects and dictate structural requirements.

5. (a) With the aid of a diagram, explain the processes of rain formation

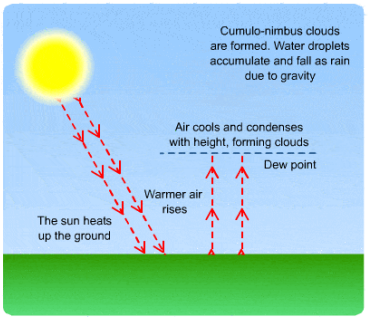
Rain formation involves several key processes within the Earth's atmosphere:

- Evaporation
  Solar energy heats water bodies, causing surface water to transform into water vapor and rise into the atmosphere.

- Condensation
  As water vapor ascends, it cools and changes back into tiny liquid droplets, forming clouds.

- Coalescence
  Within clouds, these tiny droplets collide and merge to form larger droplets.

- Precipitation
  When these droplets become heavy enough, they overcome air resistance and fall to the Earth's surface as rain.



This process is a fundamental component of the water cycle, ensuring the continuous movement of water between the Earth's surface and the atmosphere.

(b) Mention two uses of a map scale

(i) Distance Measurement
A map scale allows users to determine the real-world distance between two points on a map by providing the ratio between map distances and actual ground distances.

(ii) Area Calculation
Map scales enable the estimation of the actual size of a geographic area represented on the map, which is essential for land use planning and resource management.

(c) Give three properties of latitudes and longitudes
(i) Perpendicular Intersection
Latitudes and longitudes intersect at right angles, forming a grid that facilitates precise location referencing on Earth's surface.
(ii) Equidistant Parallels
Lines of latitude, or parallels, are equally spaced along all meridians, maintaining consistent separation from the equator to the poles.
(iii) Converging Meridians
Lines of longitude, or meridians, converge at the poles and are equally spaced along each parallel, with the distance between them decreasing from the equator toward the poles.

(d) Describe two characteristics of equatorial climate
(i) High Temperatures
Equatorial regions experience consistently high temperatures throughout the year, typically averaging around 27°C, due to direct solar radiation.

(ii) Abundant Rainfall
These regions receive substantial annual rainfall, often exceeding 2,000 millimeters, with precipitation occurring almost daily, leading to high humidity levels.
These climatic conditions support diverse ecosystems, such as tropical rainforests, characterized by rich biodiversity.

6. Manufacturing industries are establishments involved in the processing of raw materials into finished goods for consumption or further use. The decline of manufacturing industries can be attributed to various factors that limit their growth and efficiency.

One major factor is insufficient capital. Lack of funds prevents industries from purchasing modern equipment, expanding production facilities, and meeting operational costs.

Poor infrastructure is another challenge. Inadequate transport networks and unreliable power supply hinder smooth operations and increase production costs.

Competition from imported goods poses a significant threat. Cheaper and better-quality imports reduce the demand for locally produced goods, forcing industries to shut down.

Political instability and poor governance discourage investments in the manufacturing sector. Corruption and bureaucratic red tape further complicate industrial operations.

Limited access to skilled labor affects productivity. Industries struggle to adapt to modern technologies and meet global quality standards due to an unskilled workforce.

In conclusion, addressing these challenges through better policies, infrastructure development, and investment in human capital can revive manufacturing industries.

7. Livestock keeping is the rearing of animals for meat, milk, hides, and other products. In East Africa, this practice faces several challenges that limit its productivity and sustainability.

Scarcity of water and pasture due to prolonged droughts and climate change makes it difficult for livestock to thrive.

Overgrazing leads to land degradation, reducing the availability of quality grazing areas for animals.

Animal diseases, such as foot-and-mouth disease, reduce livestock numbers and affect the quality of animal products.

Inadequate veterinary services hinder timely treatment and vaccination of animals, leading to high mortality rates.

Market access is limited in rural areas, making it difficult for farmers to sell their products at competitive prices.

In conclusion, improving water supply, grazing management, and veterinary services can enhance livestock keeping practices in East Africa.

8. Natural forests are vast areas dominated by native trees and vegetation. Their distribution across the world is influenced by various factors.

Climate plays a major role. Forests thrive in regions with adequate rainfall and favorable temperatures.

Soil quality affects the growth of trees. Fertile and well-drained soils support the development of dense forests.

Topography determines forest distribution. Flat areas and gentle slopes are more likely to support forests than steep and rocky terrains.

Human activities, such as deforestation and urbanization, reduce forest cover and affect their natural distribution.

Government policies on conservation and afforestation influence the extent and protection of natural forests.

In conclusion, preserving natural forests requires addressing these factors and promoting sustainable practices.

9. River basin development involves the management and use of water resources within a river basin to support human activities and ecosystems. In Tanzania, this has brought several benefits.

Irrigation supports agriculture by ensuring a consistent water supply for crops, even during dry seasons.

Hydroelectric power generation provides clean and renewable energy to meet the country's electricity needs.

Fishing activities in rivers and reservoirs created by dams contribute to food security and local economies.

Navigation along rivers facilitates the transport of goods and people, improving trade and connectivity.

Tourism benefits from river basin development through recreational activities such as boating and fishing, attracting visitors.

In conclusion, river basin development plays a crucial role in supporting Tanzania's economy and improving livelihoods.

10. Small-scale agriculture involves farming on small plots of land using limited resources. Improving this practice in Tanzania requires targeted measures.

Providing access to affordable credit helps farmers invest in better seeds, tools, and inputs to increase productivity.

Improving infrastructure, such as roads and storage facilities, reduces post-harvest losses and enhances market access.

Promoting the use of modern farming techniques, such as crop rotation and irrigation, boosts yields.

Offering training and extension services equips farmers with knowledge and skills for efficient farming practices.
Encouraging cooperative societies enables farmers to pool resources, access markets, and bargain for better prices.
In conclusion, supporting small-scale agriculture through these measures can improve food security and livelihoods in Tanzania.