THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL OF TANZANIA

FORM TWO SECONDARY EDUCATION EXAMINATION, 2011

0013 GEOGRAPHY

Time: 2:30 Hours **ANSWERS** .

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 following items choose the correct answer from the given alternatives and write its letter in the box provided

1. The needle of a compass points to the:
   A. Grid North
   B. Magnetic field
   C. North pole
   D. Pole star
   Answer: B. Magnetic field
   Reason: The compass needle aligns itself with the Earth's magnetic field, pointing towards the magnetic poles, not the true North or Pole star.

2. The height above sea level is called:
   A. altitude
   B. contours
   C. latitude
   D. ocean
   Answer: A. altitude
   Reason: Altitude refers to the vertical distance or height of a place above sea level.

3. If the local time at place A (30° N, 35° E) is 8.00 a.m., what will be the local time at place B (27° N, 12° E)?
   A. 6.28 a.m.
   B. 6.28 p.m.
   C. 9.32 a.m.
   D. 9.32 p.m.
   Answer: A. 6.28 a.m.
   Reason: For every degree of longitude, the time differs by 4 minutes. The difference between 35°E and 12°E is 23°, translating to 92 minutes earlier at place B.

4. Block mountains are formed through:
   A. earthquakes
   B. faulting
   C. folding
   D. vulcanicity
   Answer: B. faulting
   Reason: Block mountains are created when large areas of land are uplifted or dropped along fault lines due to tectonic forces.

5. An area where a river system collects its rainwater is called:
   A. catchment area
   B. lake
   C. tributary

D. watershed

Answer: A. catchment area

Reason: A catchment area, also known as a drainage basin, is the region from which a river collects its water.

6. Pangani town at sea level has a temperature of 32°C. What is the temperature of Ruaha 1500 metres above sea level?

A. 0.6°C
B. 9°C
C. 21°C
D. 23°C

Answer: B. 9°C

Reason: The temperature decreases by approximately 6.5°C for every 1000 metres of altitude. For 1500 metres, the decrease is 9.75°C, making the temperature approximately 9°C.

7. The grid reference of station Q is 888666. What are the numbers of the Eastings and the Northings?

A. 666 are Northings and 888 are Eastings
B. 868 are Eastings and 668 are Northings
C. 886 are Eastings and 668 are Northings
D. 888 are Northings and 666 are Eastings

Answer: A. 666 are Northings and 888 are Eastings

Reason: In grid references, the first set of numbers represents Eastings, while the second set represents Northings.

8. What causes the difference between the length of day and night?

A. Longitude
B. Revolution of the earth
C. Rotation of the earth
D. The earth's orbit

Answer: C. Rotation of the earth

Reason: The Earth's rotation on its axis causes different parts of the planet to experience daylight and darkness, leading to variations in day and night length.

9. If given different kinds of R.F. scales, the smallest scale has the:

A. biggest denominator
B. biggest numerator
C. smallest denominator
D. smallest numerator

Answer: A. biggest denominator

Reason: In representative fraction (R.F.) scales, the size of the scale is inversely proportional to the denominator. A larger denominator represents a smaller scale.

10. A ship moves to the West and crosses the International Date Line (IDL). What happens with regards to time gained or lost?

A. No time is gained or lost
B. One whole day is gained
C. One whole day is lost
D. One whole day is repeated

Answer: C. One whole day is lost

Reason: When crossing the IDL from west to east, a day is subtracted; when crossing from east to west, a day is added. In this case, heading west results in losing one day.

2. Match the items in column A with those in column B by writing the letter of the correct answer below its corresponding item number in column A in the table provided.

LIST A

(i) A negative effect caused by tourism in countries like Tanzania
(ii) The science dealing with crop production and livestock rearing
(iii) Forest conservation
(iv) Formed when large masses of air with different physical properties meet
(v) It is used for cooking, heating, and producing electricity
(vi) It occurs when the earth becomes far from the sun
(vii) Maximum and minimum temperature
(viii) The lines joining places with the same pressure
(ix) The raised part of the ocean floor
(x) Weather station instruments shelter

LIST B

A. Aforestation
B. Agriculture
C. Aphelion
D. Cooking oil
E. Cyclonic rain
F. Deforestation
G. Destruction of culture
H. Isobars
I. Natural gas
J. Ocean deep
K. Perihelion
L. Relief rain
M. Ridge
N. Six's Thermometer
O. Stevenson Screen

Answers

i	ii	iii	iv	v	vi	vii	viii	ix	x
F	B	A	E	I	C	N	H	M	O

3. True or False

(i) Equinoxes mean equal day and night hours at all latitudes. TRUE
(ii) Good railways and road networks stimulate economic development. TRUE
(iii) Industrial activities have no negative impact on the environment. FALSE
(iv) It is possible to tap underground water in desert and semi-desert areas. TRUE
(v) Lake Victoria is within the rift valley. FALSE
(vi) Planets give out light. FALSE
(vii) Tanzanite is among the minerals mined in Uganda. FALSE
(viii) Trenches and ocean deeps are the same relief features of the river basin. FALSE
(ix) Two opposing longitudes can make a great circle. TRUE
(x) Use of solar energy minimizes environmental degradation. TRUE

4. (a) Study the diagram below carefully then label features A - F.

A stands for continental shelf – This is the shallow, submerged extension of the continent.
B stands for continental slope – This is the steep slope where the continental shelf drops to the deep ocean floor.
C stands for ocean trench – A deep depression in the ocean floor, often formed at tectonic plate boundaries.
D stands for mid-ocean ridge – A continuous mountain range under the ocean, created by tectonic activity.
E stands for abyssal plain – A flat and vast area on the deep ocean floor.
F stands for seamount – A submerged volcanic mountain that rises from the ocean floor but does not reach the surface.

(b) Define the following geographical terms

(i) Geography
Geography is the study of the Earth's physical features, human environments, and the interactions between them.

(ii) International Date Line (IDL)
The International Date Line is an imaginary line roughly following the 180° longitude where the date changes by one day when crossed.

(iii) Map
A map is a scaled representation of the Earth's surface, showing natural and man-made features.

(iv) Renewable resources
Renewable resources are natural resources that can regenerate naturally over time, such as solar energy, wind, and water.

(v) Tourism industry
The tourism industry involves activities and services that cater to travelers visiting destinations for leisure or business purposes.

(vi) Transport
Transport refers to the movement of people, goods, and services from one place to another through roads, railways, air, or waterways.

(c) Identify four important things to be considered in the location of industries

Availability of raw materials ensures steady supply for production.
Access to reliable energy sources supports uninterrupted industrial activities.
Proximity to transportation networks reduces logistics costs and ensures easy distribution.
Availability of skilled labor improves productivity and efficiency in operations.

5. (a) Study carefully the climatic data given for station Y, then answer the questions that follow:

Month:	J	F	M	A	M	J	J	A	S	O	N	D
Temperature (°C):	25.5	25.8	26	26	27.3	26.5	26.5	26.1	26.8	26.8	26	25.2
Rainfall (mm):	246	186	185	190	184	176	174	197	185	206	261	266

(i) Calculate the mean annual temperature
The sum of monthly temperatures is divided by 12. The mean temperature is 26.21°C.

(ii) Calculate the annual total rainfall
The total rainfall for all months is 2,456 mm.

(iii) State the annual range of temperature
The difference between the highest (27.3°C) and lowest (25.2°C) temperatures is 2.1°C.

(iv) Suggest the type of climate for the station
The station experiences an equatorial climate characterized by high temperatures and consistent rainfall.

(v) The economic activities taking place in the station are agriculture and tourism. Agriculture thrives due to fertile soils and reliable rainfall, while tourism is supported by natural attractions and a favorable climate.

(b) Explain the following terms as used in Geography

Eco-tourism involves visiting natural areas responsibly to conserve the environment and support local communities.
Extensive farming uses large areas of land with minimal labor and input to produce crops or rear animals.
Geothermal energy is the heat from the Earth's interior, used for generating electricity and heating.
Intensive farming involves high use of resources and labor to maximize agricultural yields on a small area.
Underground water is water stored below the Earth's surface in aquifers and used for domestic, industrial, and agricultural purposes.

(c). A map may not be useful if it lacks the following

A title provides information about the purpose and content of the map.
A scale allows users to measure real distances represented on the map.
A key or legend explains the symbols used on the map.
Compass direction indicates orientation on the map, usually showing north.
Clear boundaries help identify areas accurately on the map.

(d). Write down five requirements for the establishment of plantation agriculture

- Availability of large tracts of fertile land supports large-scale farming.
- Reliable water supply ensures consistent irrigation.
- Favorable climate conditions, such as adequate rainfall and temperature, support crop growth.
- Access to labor ensures enough workforce for planting, harvesting, and other operations.
- Transportation networks facilitate the export of plantation products to markets.

6. Natural gas refers to a naturally occurring hydrocarbon gas mixture used as a source of energy. The Songosongo natural gas project in Tanzania has significantly impacted the country's economy. It provides a reliable and clean source of energy, reducing dependence on imported fuels. This saves foreign exchange and strengthens the national economy.

Natural gas has created employment opportunities for local communities, both directly in extraction and indirectly in related industries. This has improved the living standards of people and stimulated economic growth. The revenue generated from natural gas production contributes to national income through taxes and royalties, enabling the government to fund infrastructure development and social services.

The use of natural gas in power generation has led to more stable and affordable electricity, which supports industrial growth and attracts investments. Additionally, natural gas is environmentally friendly compared to other fossil fuels, as it produces fewer greenhouse gases, making it a sustainable energy choice for the future.

In conclusion, natural gas from Songosongo has brought significant economic benefits to Tanzania, including energy security, employment, and revenue generation, while contributing to environmental conservation.

7. Water supply refers to the availability and accessibility of water for domestic, industrial, and agricultural use. In Tanzania, several factors affect water supply, leading to challenges in meeting the needs of the population.

Rapid population growth increases demand for water, putting pressure on available resources. This leads to over-extraction of water from rivers, lakes, and underground sources. Poor management and infrastructure result in significant water losses during distribution, reducing the amount of water that reaches users.

Climate change contributes to irregular rainfall patterns and prolonged droughts, which reduce water availability. Deforestation and environmental degradation affect water catchment areas, reducing the natural storage and flow of water.

Urbanization has led to pollution of water sources from industrial and domestic waste, making water unsafe for use. Lack of investment in water infrastructure limits the capacity to store, treat, and distribute water efficiently.

In conclusion, addressing these factors requires sustainable water management practices, investment in infrastructure, and environmental conservation to ensure reliable water supply for all.

8. Forests are large areas dominated by trees and other vegetation, and they play a vital role in human life. Forests provide timber and non-timber products that support livelihoods and industries. Timber is used in construction, furniture-making, and paper production, while non-timber products like fruits and herbs are used for food and medicine.

Forests act as carbon sinks, absorbing carbon dioxide and reducing the effects of climate change. They also regulate weather patterns and maintain the water cycle, ensuring consistent rainfall for agriculture. Forests are habitats for diverse flora and fauna, supporting biodiversity and ecological balance.

Forests contribute to tourism by attracting visitors to their natural beauty and wildlife. They also provide employment opportunities in forestry-related activities, boosting local economies. Furthermore, forests play a cultural and spiritual role in many communities, providing spaces for rituals and traditions.

In conclusion, forests are indispensable to human life, providing economic, environmental, and cultural benefits. Sustainable forest management is essential to preserve these resources for future generations.

9. Tourism refers to the activities of people traveling to and staying in places outside their usual environment for leisure or business. Improving the tourism industry in Tanzania requires a multi-faceted approach.

Investment in infrastructure, such as roads, airports, and hotels, ensures easy access to tourist destinations and enhances visitors' experiences. Promoting Tanzania's attractions, including national parks, beaches, and cultural heritage, through effective marketing strategies increases international and domestic tourism.

Strengthening safety and security measures builds tourists' confidence in visiting the country. Offering diverse tourism packages, such as eco-tourism, cultural tourism, and adventure tourism, caters to different preferences and attracts a wider audience.

Training and developing skilled personnel in the tourism industry improve service delivery, ensuring high customer satisfaction. Encouraging community involvement in tourism initiatives ensures that local populations benefit economically and socially.

In conclusion, by addressing infrastructure, marketing, safety, diversity, and community involvement, Tanzania can develop a thriving tourism industry that contributes significantly to its economy.

10. Timber refers to wood prepared for use in construction and manufacturing. The timber industry in the Congo Basin faces several challenges that hinder its growth and sustainability.

Poor infrastructure, such as inadequate roads and railways, limits access to forests and transportation of timber to markets. Illegal logging is rampant due to weak enforcement of laws, leading to environmental degradation and loss of revenue.

Political instability in the region creates an unfavorable environment for investment in the timber industry. Lack of modern technology and equipment reduces efficiency and increases production costs, making it difficult to compete in global markets.

High demand for timber has led to overexploitation of forests, threatening biodiversity and the sustainability of the industry. Limited investment in reforestation programs fails to address the depletion of forest resources.

In conclusion, addressing these problems requires improving infrastructure, enforcing laws, promoting reforestation, and investing in modern technology to ensure the sustainable growth of the timber industry in the Congo Basin.