THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL

CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

013 **GEOGRAPHY**

(For Both School and Private Candidates)

Time: 3 Hours **ANSWERS** **Year: 2017**

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(s) number in the answer booklet(s) provided.

(i) The luminous body which provides energy to the solar system is
A Sun
B Earth
C Moon
D Planet
E Satellite

Correct answer: A Sun
Reason: The Sun is a luminous body that emits its own light and provides energy to the solar system.

(ii) The earth's layer which consists of sial and sima is called
A lithosphere
B hydrosphere
C stratosphere
D atmosphere
E thermosphere

Correct answer: A lithosphere
Reason: The lithosphere includes the earth's crust which is made up of sial (continental crust) and sima (oceanic crust).

(iii) Which of the following is the process of wearing down the rock surface by wind where the load becomes cutting tools?
A Deflation
B Attrition
C Abrasion
D Corrosion
E Hydration

Correct answer: C Abrasion
Reason: Abrasion is the process where wind-borne particles scrape and wear away rock surfaces like sandpaper.

(iv) The renewed power of erosion of a river is called
A river capture
B river erosion
C river rejuvenation
D river meanders
E river basin

Correct answer: C river rejuvenation
Reason: River rejuvenation is the renewed energy of a river to erode vertically due to land uplift or fall in sea level.

(v) Prediction of the state of atmosphere in a region for 24 to 48 hours is known as
A weather elements
B weather report
C weather instrument
D weather station
E weather forecasting

Correct answer: E weather forecasting
Reason: Weather forecasting is the prediction of atmospheric conditions over a short period such as 24–48 hours.

(vi) The process through which rain water enters the ground is called
A Evaporation
B Infiltration
C Transpiration
D Condensation
E Percolation

Correct answer: B Infiltration
Reason: Infiltration is the process of water entering the soil surface after rainfall.

(vii) The process of changing granite to gneiss rock is known as
A sedimentation
B vulcanism
C denudation
D metamorphism
E exfoliation

Correct answer: D metamorphism
Reason: Metamorphism involves transformation of rocks like granite into gneiss due to heat and pressure.

(viii) Which of the following is another name for Savanna climate in Africa
A Tropical maritime
B Warm temperature maritime
C Tropical grassland
D Warm temperature desert
E Cool temperate western margin

Correct answer: C Tropical grassland

Reason: The Savanna climate is characterized by tropical grasslands with distinct wet and dry seasons.

(ix) The process of peeling off and falling of rock mass is called
A disintegration
B weathering
C mass wasting
D erosion
E exfoliation

Correct answer: E exfoliation
Reason: Exfoliation is the process where outer layers of rocks peel off due to temperature changes or pressure release.

(x) Which of the following are features of ocean floor?
A Basin, Ocean deep and Cliff.
B Trench, Continental shelf and Stump
C Trench, Ridge and Ocean deep.
D Ocean deep, Continental shelf and Drumlin.
E Basin, Continental shelf and Tombolo.

Correct answer: C Trench, Ridge and Ocean deep
Reason: These are actual physical features found on the ocean floor formed by tectonic and volcanic activity.

2. Match the items in List A with the responses in List B by writing the letter of the corresponding response besides the item number in the answer booklet(s) provided.

List A
(i) Removal of loose materials from the rocks by the force of moving water.
(ii) Fine and light particles moved by wind.
(iii) Dissolved soluble minerals which are found in rocks by flowing river water.
(iv) Tearing away of blocks of rocks which have become frozen into the sides or bottom of a glacier.
(v) Swash carries pebbles and other rock fragments from the shore of the ocean.

List B
A Corrosion
B Plucking
C Hydraulic
D Siltation
E Deposition
F Attrition
G Exfoliation
H Abrasion

I Solution
J Suspension

Answers:
(i) C
(ii) J
(iii) I
(iv) B
(v) H

3. (a) Define the term soil.
Soil is the uppermost layer of the earth's surface composed of organic matter, minerals, air, and water which supports plant life.

(b) Briefly explain four importance of soil to human life.
Soil provides a medium for plant growth, which is essential for food production.
Soil filters and stores water, making it available for plants and human use.
Soil is a habitat for many organisms that contribute to ecological balance.
Soil supports construction by providing materials such as clay, sand, and gravel.

(c) Mention three sources of soil nutrients.
Decomposed organic matter (humus)
Weathering of parent rock material
Artificial fertilizers or manure used in agriculture.

4. (a) Define compound bar graph.
A compound bar graph is a type of bar chart in which each bar is divided into segments to represent different components or categories of a total. It helps in comparing different data sets in one bar.

(b) Study carefully the table below on hypothetical data about cash crops production (in '000 tonnes) in East Africa in the year 2000, then answer the questions that follow.

Country	Coffee	Tea	Cotton
Kenya	2200	2000	1800
Uganda	1700	700	800
Tanzania	1300	1900	2300

(i) Draw compound bar graphs to represent the data provided.
(This requires a graphical illustration which can be provided separately as an image.)

(ii) Outline four merits of using compound bar graph.

Compound bar graphs allow comparison of multiple variables at once.
They show the contribution of each component clearly within a group.
They save space by combining related data into single bars.
They enhance visual interpretation and understanding of related data.

5. (a) Describe the following research terms:
(i) Population
Population refers to the total number of people or organisms in a given area at a specific time. In research, it refers to the total group from which a sample is drawn for study.

(ii) Random sampling
Random sampling is a sampling method where every individual in the population has an equal chance of being selected, minimizing bias.

(iii) Literature review
Literature review is the process of collecting, analyzing, and summarizing existing research or published information related to the topic under investigation.

(b) (i) Define secondary data.
Secondary data is information that has already been collected, processed, and published by other people or institutions.

(ii) Give four merits of secondary data.
It is cheaper and less time-consuming to obtain.
It is readily available for immediate use.
It helps in comparing with primary data for accuracy.
It provides background knowledge to the researcher.

6. (a) Describe plane table survey.
Plane table survey is a method of surveying in which observations and plotting are done simultaneously on the field using a drawing board mounted on a tripod, an alidade, and other tools.

(b) Explain five importance of plane table survey.
It gives immediate and accurate plotting of field observations.
It is suitable for small area surveys and detailed mapping.
It is simple, cheap, and requires minimal equipment.
It helps detect and correct errors instantly during survey.
It allows direct visual inspection and interpretation of the terrain.

7. Carefully study the map extract of Arusha (Sheet 55/3) provided then answer the questions that follow.

(a) Describe the relief of the mapped area.

The relief of the area is varied, including highland features such as hills and ridges marked by concentric contours. There are also lowland areas with gentler slopes and flat plains, especially in the western part.

(b) Giving evidences, mention the major means of transport shown in a map.
The major means of transport is road transport. Evidence includes the presence of motorable roads, marked in red, and footpaths/tracks marked by black broken lines. There is also a railway line in the southeastern part of the map.

(c) Change the scale of the map into a statement scale.
The given scale is 1:50,000
Statement scale = 1 cm on the map represents 0.5 km on the ground.

(d) Measure the length of the road from grid reference 378314 to grid reference 480276 in kilometres.
Using a ruler on the map, the road measures approximately 21.5 cm.
1 cm = 0.5 km
Therefore, 21.5 cm × 0.5 km = 10.75 km

(e) With evidence from the map, identify three social services which are found in this area.
Presence of schools (symbol of a building with a flag)
Presence of health facilities (hospital or dispensary symbols)
Presence of religious institutions (church/mosque symbols)

8. Study carefully photograph provided then answer the questions that follows.

(a) Suggest the title of the photograph.
Timber Processing Yard

(b) (i) Name the type of forest seen in the photograph.
Man-made or planted forest

(ii) Give two characteristics of the forest named in (i).
Trees are evenly spaced and arranged in rows.
Species are usually of the same type and age group.

(c) Outline three ways of interpreting the photograph given.
Observation of physical features and objects in the photo.
Identifying human activities or land use in the area.
Comparing known information or using prior knowledge about the objects and environment shown.

(d) (i) Identify the product in the middle ground of the photograph.
Timber or logs

(ii) Give two uses of the product in the middle ground of the photograph.

Used for building and construction
Used as raw material in furniture and wood-based industries
9. Explain seven ways of improving tourism industry in Tanzania.

One way of improving the tourism industry in Tanzania is through the development of infrastructure. Good roads, airports, reliable electricity, clean water supply, and communication networks are essential for attracting tourists. Improved infrastructure enhances accessibility to tourist attractions and provides comfort to visitors.

Another way is the promotion and marketing of tourism attractions. The government and private stakeholders should actively market Tanzania's rich cultural heritage, national parks, and beaches through international media, travel expos, and online platforms to increase global awareness.

Training and capacity building in the hospitality and tourism sectors is also vital. Workers in hotels, lodges, tour companies, and national parks need to be well-trained in customer care, language skills, and tourism management to offer professional services and create memorable experiences for tourists.

Security improvement is essential in boosting tourism. Ensuring that tourist destinations are safe from crime, political instability, and health hazards builds confidence among visitors and encourages repeat visits and positive reviews.

Preservation and conservation of tourist attractions is another crucial measure. Natural resources, wildlife, and historical sites must be protected from degradation, pollution, and illegal activities through proper laws, awareness campaigns, and community involvement.

Reducing tourism-related taxes and fees can also improve the industry. High charges on visas, park entry, and other services discourage tourists. Offering incentives, discounts, and packages makes tourism more affordable and attractive.

Finally, involving local communities in tourism development helps improve the industry. Locals can provide cultural experiences, act as guides, and offer accommodation, thereby enriching tourism while benefiting economically. Their participation also ensures conservation and protection of attractions.

10. Elaborate seven ways of managing industrial pollutants to the environment.

One way of managing industrial pollutants is through the use of cleaner production technology. Industries should adopt environmentally friendly technologies that minimize waste production and use less harmful substances in the manufacturing process.

Another way is through proper waste treatment before disposal. Solid, liquid, and gaseous wastes must be treated using physical, chemical, or biological processes to reduce their toxicity before releasing them into the environment.

Recycling and reusing industrial waste is another effective approach. Materials such as metals, plastics, and water can be processed and used again, reducing the need for disposal and conserving resources.

Enforcing environmental laws and regulations helps in managing pollutants. Government agencies should inspect industries regularly and ensure they follow pollution control standards. Offenders must be penalized to enforce compliance.

Educating industrial operators and workers on environmental conservation is essential. Awareness programs on the effects of pollution and the importance of proper waste management help create a culture of environmental responsibility within industries.

Encouraging corporate social responsibility (CSR) is another way. Industries should support environmental conservation efforts such as tree planting, community clean-ups, and sponsoring environmental awareness programs.

Finally, proper site selection and zoning for industries reduces pollution risks. Industries should be located far from residential areas, water sources, and farmlands to prevent direct exposure of pollutants to people and ecosystems.

11. Describe five uses of population data to a country.

Population data is used for national planning. The government relies on population figures to plan for infrastructure, health services, education facilities, housing, and other social services based on the number and distribution of people.

It is used in the allocation of resources. Accurate data on population size and composition helps the government to distribute national resources such as revenue, medical supplies, and food aid fairly across regions.

Population data aids in policy formulation. Information about age structure, fertility rate, and mortality helps in designing policies related to employment, youth development, reproductive health, and elderly care.

It is used in electoral processes. Data on population helps in demarcating electoral boundaries, determining the number of constituencies, and allocating parliamentary seats to ensure equal representation.

Population data supports economic development planning. By knowing the working-age population and dependency ratio, the government and investors can make informed decisions about labor supply, investment areas, and social protection programs.

12. Explain six problems associated with expansion of cities in Tanzania.

One major problem is the rise of unplanned settlements. As cities grow, many people settle in informal areas without proper housing plans, leading to poor sanitation, congestion, and insecurity.

Increased pollution is another problem. Expansion of cities leads to more vehicles, factories, and waste production, which contributes to air, water, and land pollution, posing health risks to residents.

Traffic congestion becomes a serious issue. As the urban population grows, roads become overcrowded with vehicles, resulting in traffic jams, increased travel time, and higher fuel consumption.

Pressure on social services is common. Health facilities, schools, water supply, and electricity infrastructure often become overstretched and unable to meet the growing demand from the expanding population.

Unemployment and underemployment are also challenges. Cities attract many people seeking jobs, but opportunities are often limited, leading to high unemployment rates and informal sector growth.

Lastly, there is a strain on natural resources. Expansion leads to encroachment on forests, water bodies, and agricultural lands as more space is needed for housing, industries, and roads, causing environmental degradation.