THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL OF TANZANIA

DIPLOMA IN SECONDARY EDUCATION EXAMINATION

713 **GEOGRAPHY**

Time: 3 Hours. **ANSWER** **Year: 2016 p.m.**

Instructions

1. This paper consists of sections A, B and C.
2. Answer **all** questions in sections A and **two (2)** questions from each of section B and C.
3. Section A carries **40** marks, section B and section C carries 30 marks each.
4. Cellular phones and unauthorized materials are **not allowed** in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).

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1. Define water harnessing and mention two ways of water harnessing.

Water harnessing is the process of collecting, storing, and utilizing water resources for domestic, agricultural, industrial, and other purposes. It involves controlling and directing water to ensure its availability and efficient use.

One way of water harnessing is constructing dams, which store water for irrigation, electricity generation, and domestic use.

Another way is rainwater harvesting, where rainwater is collected from rooftops or other surfaces and stored in tanks or reservoirs for later use.

2. What is a valley? Mention two types of valleys.

A valley is a low-lying area between hills or mountains, usually with a river or stream flowing through it. Valleys are formed by processes such as river erosion or glacial movement over time.

One type of valley is a V-shaped valley, which is formed by river erosion in its youthful stage, creating steep sides and a narrow floor.

Another type is a U-shaped valley, which is formed by glacial erosion, characterized by a wide flat floor and steep sides.

3. Explain three natural and three human causes of air pollution.

One natural cause of air pollution is volcanic eruptions, which release ash, gases, and fine particles into the atmosphere.

Another natural cause is dust storms, which occur in arid regions and carry large amounts of dust into the air, reducing air quality.

Forest fires caused naturally by lightning also contribute to air pollution by releasing smoke and carbon particles.

One human cause is industrial emissions, where factories release pollutants like carbon monoxide, sulfur dioxide, and nitrogen oxides into the atmosphere.

Vehicle emissions from burning fossil fuels produce carbon monoxide and other harmful gases, which pollute the air.

Burning of solid waste, especially plastics, releases toxic fumes such as dioxins, which degrade air quality.

4. Suggest three procedures of teaching the solar system.

The teacher can begin by introducing the concept using visual aids such as charts, models, or multimedia presentations to show the arrangement of planets and other celestial bodies.

Next, the teacher can explain each planet's characteristics, such as size, distance from the sun, and unique features, ensuring students understand differences.

Finally, the teacher can engage students in activities like drawing and labeling the solar system or group discussions to reinforce learning.

5. Identify three precautions to avoid errors during tape or chain surveying.

Ensure the tape or chain is properly stretched and straightened to avoid inaccurate measurements caused by sagging or bending.

Measurements should be taken on level ground where possible, or appropriate corrections should be applied when working on slopes.

The chain or tape should be checked regularly for damage or wear and repaired or replaced to maintain accuracy.

6. Outline three roles of using quantitative techniques in Geography.

Quantitative techniques help in analyzing numerical data such as population figures, rainfall records, and temperature patterns, making it easier to identify trends.

They allow for statistical comparisons between different places or time periods, supporting evidence-based conclusions.

Quantitative methods aid in creating visual representations such as graphs and charts, which simplify complex geographical data for better understanding.

7. Explain three cultural beliefs contributing to rapid population growth in African societies.

Many communities value large families as a sign of wealth, social status, and labor supply for agricultural activities.

Some cultures believe that children are a source of security in old age, encouraging families to have many offspring.

In certain societies, early marriages are common, leading to longer reproductive periods and higher birth rates.

8. Explain three uses of a Geography syllabus.

A syllabus guides teachers on the topics to cover and the sequence in which they should be taught, ensuring curriculum objectives are met.

It helps in lesson planning by indicating the depth of content required for each topic and the expected learning outcomes.

The syllabus serves as a tool for evaluation, as examinations are set based on the content outlined in it.

9. Enumerate three problems facing population policy implementation in Tanzania.

Limited public awareness means many people are not familiar with the objectives or benefits of the population policy, reducing its effectiveness.

Inadequate funding makes it difficult to implement programs such as family planning services and education campaigns.

Cultural resistance to change, where traditional values promote large families, hinders acceptance of the policy.

10. Outline three types of land survey.

Topographical survey records natural and man-made features of an area, including elevations, to produce maps and plans.

Cadastral survey determines land boundaries and ownership, used for legal and property purposes.

Engineering survey provides detailed measurements for designing and constructing infrastructure such as roads, bridges, and buildings.

11. Analyse six ways of managing problems arising from misuse of valleys in East African countries.

Afforestation programs can be implemented along valley slopes to reduce soil erosion. Planting trees stabilizes the soil with their root systems, minimizes water runoff, and helps restore degraded valley environments.

Contour farming can be adopted in agricultural activities within valleys. This practice reduces the speed of water flow, prevents excessive soil washing, and maintains soil fertility for crop production.

Strict enforcement of land use regulations ensures that human settlements, farming, and industrial activities within valleys follow environmental guidelines. This helps protect valleys from overexploitation and pollution.

Promotion of sustainable farming methods such as crop rotation and use of organic fertilizers reduces land degradation in valleys and enhances long-term productivity.

Community education programs can raise awareness on the importance of valleys for water storage, biodiversity, and ecosystem services, encouraging people to conserve them.

Establishment of buffer zones along valley rivers and wetlands prevents direct encroachment and maintains natural vegetation that supports valley stability.

12. Analyse three disaster-management phases and provide three activities for each phase.

The preparedness phase involves planning and readiness before a disaster occurs. Activities include training communities in emergency response, setting up early warning systems, and stockpiling essential supplies like food, water, and medical kits.

The response phase occurs immediately after a disaster strikes, focusing on saving lives and reducing damage. Activities include search and rescue operations, provision of emergency shelter, and distribution of relief materials to affected populations.

The recovery phase focuses on restoring normal life after the disaster. Activities include rebuilding infrastructure, providing psychological support to victims, and implementing rehabilitation programs to restore livelihoods.

13. Elaborate six principles embedded in eco-tourism.

Eco-tourism must ensure conservation of the environment by protecting natural habitats, wildlife, and ecosystems from damage caused by tourism activities.

It should benefit local communities economically by creating jobs, supporting local businesses, and encouraging the sale of traditional products.

Tourism activities must be culturally respectful, allowing visitors to appreciate local traditions without causing disruption or exploitation.

Educational value is a key principle, where visitors gain awareness of conservation, local culture, and sustainable living practices.

Eco-tourism should minimize waste and pollution through practices such as proper waste disposal, recycling, and using renewable energy sources.

Long-term sustainability is essential, ensuring that tourism development meets present needs without compromising future generations' ability to enjoy the same resources.

14. Explain three disadvantages and three advantages of nuclear energy.

One advantage of nuclear energy is that it produces large amounts of electricity with minimal greenhouse gas emissions, making it an environmentally cleaner option than fossil fuels.

Another advantage is its high energy output from small amounts of fuel, meaning less raw material is needed to produce significant power.

Nuclear energy plants operate reliably for long periods without being affected by weather changes, ensuring a stable power supply.

A major disadvantage is the challenge of disposing of radioactive waste, which remains dangerous for thousands of years and requires secure storage.

The high cost of constructing and maintaining nuclear plants is another disadvantage, making it less accessible for developing countries.

There is also the risk of catastrophic accidents, such as meltdowns, which can have devastating environmental and human health consequences.

15. Identify and explain the most effective teaching and learning techniques in Geography lessons.

The field trip method is highly effective because it gives students first-hand experience of geographical features and processes, helping them link theory to real-life examples.

Map work exercises are effective in developing spatial skills, enabling students to interpret and analyze various types of maps accurately.

Use of audio-visual aids, such as videos, charts, and slides, enhances understanding by presenting complex concepts in a clear and engaging manner.

Group discussions encourage collaborative learning, allowing students to share ideas, challenge each other's views, and deepen their understanding of topics.

The project method involves students investigating a topic in depth, promoting research skills, creativity, and independent learning.

Demonstration techniques, such as showing how to use geographical instruments, provide practical skills that are essential in the subject.

16. Discuss why practical Geography needs specified materials.

Practical Geography requires accurate instruments such as compasses, measuring tapes, and GPS devices for reliable data collection during fieldwork. Without proper tools, measurements and observations may be inaccurate.

Maps and atlases are essential for interpreting spatial data and teaching location skills. They allow learners to visualize geographic information and patterns effectively.

Weather instruments, such as rain gauges and thermometers, are necessary for climate and weather studies, enabling students to collect real-time data for analysis.

Specifically designed models, such as relief models or globe replicas, help in demonstrating three-dimensional geographical concepts that cannot be easily understood from text alone.

Stationery like graph papers, rulers, and protractors are also necessary for drawing maps, graphs, and diagrams accurately, which is a key part of Geography assessments.

17. Show the salient features of a scheme of work and state its significance to a Geography teacher.

A scheme of work contains the list of topics to be covered, ensuring that the teacher follows the official syllabus and meets all curriculum requirements.

It specifies the time allocation for each topic, helping the teacher distribute lessons evenly and avoid rushing at the end of the term.

It indicates the teaching methods and resources to be used, ensuring lessons are planned with suitable instructional materials.

The scheme of work includes assessment plans such as tests, assignments, and fieldwork, ensuring continuous evaluation of student progress.

It serves as a reference document for other teachers, ensuring continuity in teaching if the main teacher is unavailable.

18. Explain how you would conduct a fair assessment for form II Geography students.

I would begin by preparing clear and measurable questions that reflect the content taught, ensuring that all students are tested on the same knowledge and skills.

I would avoid bias by marking all scripts using a standard marking scheme, so that every student is assessed against the same criteria.

The assessment would include a variety of question types, such as multiple-choice, structured, and practical tasks, to give all students an equal chance to demonstrate their abilities.

I would provide feedback to each student, explaining their strengths and areas for improvement, so that the assessment becomes a learning tool as well as a grading process.

I would also ensure that the test environment is free from cheating and distractions, maintaining integrity and fairness for all candidates.