THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL OF TANZANIA

DIPLOMA IN SECONDARY EDUCATION EXAMINATION

713 GEOGRAPHY

Time: 3 Hours **ANSWERS** **Year: 2011**

Instructions

1. This paper consists of section A, B and C.

2. Answer all questions in section A, two questions from section B and two questions from section C.

SECTION A (40 Marks)

Answer all questions in this section.

1. Describe the four (4) salient physical features of East Africa

Mountains: One feature is mountains, rising steeply, forming natural barriers. They influence climate, supporting agriculture and economic development through scenic landscapes.

Plains: Plains are flat, expansive lowlands, ideal for farming. They enhance productivity, boosting economic growth and community stability through fertile land.

Plateaus: Plateaus are elevated, flat areas, offering unique ecosystems. They support biodiversity, contributing to environmental health and sustainable development.

Rivers: Rivers flow through regions, providing water resources. They sustain agriculture, enhancing economic stability and societal progress through reliable water supply.

2. Briefly explain four (4) factors which contribute to high birth rates

Economic Needs: One factor is economic needs, where large families provide labor. Families rely on children for work, increasing population and straining educational resources.

Cultural Norms: Cultural values favoring large families boost birth rates. Traditions encourage many children for social status, impacting health and education access in communities.

Lack of Education: Limited education, especially for women, raises birth rates. Without training in science or literacy, individuals have more children, increasing population pressures and resource demands.

Religious Beliefs: Religious encouragement of procreation drives growth. Faith-based norms favor many children, increasing population and necessitating resource management efforts for stability.

3. Identify and explain briefly four (4) causes of high infant mortality

Poor Healthcare: One cause is poor healthcare, lacking medical services. Inadequate facilities increase infant deaths, requiring health improvements to enhance community well-being and development.

Malnutrition: Malnutrition, due to food scarcity, raises mortality. Insufficient nutrition in early life leads to health issues, necessitating nutritional programs for societal progress and stability.

Infections: Infectious diseases, like pneumonia, cause deaths. Lack of treatment increases infant vulnerability, demanding health initiatives to improve survival rates and community health.

Poverty: Poverty limits access to resources, increasing mortality. Economic hardship prevents care, requiring poverty reduction strategies to support child health and societal growth.

4. What do you understand by the term “Prismatic Compass Survey”?

Prismatic compass survey refers to a method using a compass with a prism to measure directions, aiding navigation and land measurement. It supports resource mapping, enhancing productivity and development through accurate spatial data.

5. Outline the economic importance of glaciation

Resource Availability: One importance is resource availability, exposing minerals. Glacial retreat uncovers deposits, boosting economic growth and industrial development through accessible raw materials.

Tourism Attraction: Glaciated landscapes attract tourists, generating income. Scenic areas draw visitors, enhancing economic stability and community progress through recreational opportunities.

Water Supply: Glaciers provide water, supporting agriculture. Meltwater sustains farming, improving productivity and societal development through reliable irrigation resources.

Energy Production: Glacial melt supports hydropower, ensuring power. Water flow generates electricity, enhancing economic stability and industrial growth through sustainable energy sources.

6. Explain the advantages and disadvantages of tourist industry

Advantages:

Economic Growth: One advantage is economic growth, creating jobs. Tourism boosts income, supporting community stability and development through increased employment opportunities.

Cultural Exchange: It fosters cultural exchange, broadening perspectives. Visitors learn local traditions, enhancing social cohesion and societal progress through mutual understanding.

Infrastructure Development: Tourism improves infrastructure, like roads. Enhanced facilities support economic activity, boosting community development and stability through better services.

Disadvantages:

Environmental Degradation: One disadvantage is environmental degradation, like pollution. Tourist activities harm ecosystems, necessitating conservation efforts for sustainable development and health.

Cultural Erosion: Tourism causes cultural erosion, diluting traditions. Commercialization affects heritage, challenging societal identity and requiring preservation strategies for stability.

Economic Inequality: It creates economic inequality, benefiting elites. Tourism profits concentrate, necessitating inclusive policies to ensure equitable development and community progress.

7. (a) What is environmental pollution?

Environmental pollution refers to harmful substances contaminating air, water, or land, like chemicals, affecting health and ecosystems, necessitating management for sustainable development and stability.

7. (b) Make a classification of environmental pollution

Air Pollution: Contamination of air by gases, like emissions, harms health, requiring science-based solutions for environmental stability and community well-being.

Water Pollution: Pollution of water by chemicals, like oil, affects ecosystems, necessitating management for resource sustainability and societal development.

Land Pollution: Contamination of soil by waste, like plastics, degrades land, demanding strategies for environmental health and economic productivity through clean practices.

8. (a) Define pollution

Pollution refers to the introduction of harmful substances into the environment, like toxins, disrupting ecosystems and health, requiring management for sustainable development and community stability.

8. (b) Name the major types of pollution found in the world

Air Pollution: Air pollution, from industrial emissions, harms health, necessitating science solutions for environmental stability and societal progress through clean air initiatives.

Water Pollution: Water pollution, from chemical runoff, affects ecosystems, requiring management for resource sustainability and development through water quality improvements.

Land Pollution: Land pollution, from waste dumping, degrades soil, demanding strategies for environmental health and economic productivity through sustainable practices.

9. Name the basic requirements for developing Hydro-electric power

Water Flow: One requirement is sufficient water flow, ensuring power generation. Rivers provide energy, supporting economic stability and development through reliable science resources.

Geographical Features: Suitable terrain, like valleys, is needed. Stable landforms sustain dams, enhancing geographic energy production and societal progress through infrastructure.

Infrastructure: Dams and turbines require infrastructure, boosting capacity. Science power plants ensure efficiency, supporting economic growth and community stability through energy access.

Funding: Adequate funding supports construction, ensuring viability. Investments in science projects enhance development, providing sustainable energy and economic benefits for communities.

10. Explain the significance of studying geography in schools

Environmental Awareness: One significance is environmental awareness, understanding ecosystems. Studying pollution educates on sustainability, enhancing societal progress and development through informed practices.

Economic Understanding: It provides economic understanding, analyzing resources. Learning trade patterns boosts productivity, supporting community stability and growth through strategic planning.

Cultural Appreciation: Geography fosters cultural appreciation, exploring diversity. Studying traditions enhances social cohesion, contributing to societal development and educational outcomes through shared values.

Spatial Skills: It develops spatial skills, aiding navigation. Mapping improves decision-making, supporting economic stability and community progress through practical knowledge in education.

SECTION B (40 Marks)

Answer two (2) questions from this section.

11. Discuss four specific skills acquired by students when they are learning geography

Analytical Skills: One skill is analytical thinking, evaluating data. Students analyze pollution trends, enhancing problem-solving and educational outcomes through critical science approaches.

Communication Skills: Learning geography develops communication, presenting ideas. Students discuss resource use, improving collaboration and societal engagement through effective science expression.

Research Skills: It builds research skills, gathering information. Students investigate economic patterns, supporting educational progress and development through systematic science inquiry.

Decision-Making Skills: Geography fosters decision-making, solving issues. Students address environmental challenges, enhancing societal stability and progress through informed science choices.

12. (a) What is meant by teaching aids?

Teaching aids refer to tools, like charts, enhancing instruction, clarifying concepts like resource management, supporting educational effectiveness and student learning through science-based resources.

12. (b) Comment on the role of teaching aids in teaching and learning

Engagement: One role is engagement, making lessons interactive. Teaching aids, like maps, captivate students, boosting science learning outcomes and teaching effectiveness through visual tools.

Clarity: They ensure clarity, simplifying concepts. Charts on pollution reduce confusion, enhancing educational understanding and science instruction quality through clear science communication.

Retention: Teaching aids improve retention, reinforcing memory. Models of ecosystems aid recall, supporting science education progress and teaching impact through memorable learning experiences.

13. Give a critique on the methods used to a Geography Teacher

Strength – Interactive Methods: One strength is interactive methods, like discussions. Engaging students on resource use enhances science learning, improving teaching effectiveness and educational outcomes.

Weakness – Over-Reliance on Lectures: A weakness is over-reliance on lectures, limiting engagement. Monotonous science talks on pollution reduce participation, necessitating diverse strategies for better teaching.

Strength – Use of Technology: Technology, like videos, is a strength. Science visuals on ecosystems boost comprehension, enhancing geography teaching and learning through innovative methods.

Weakness – Limited Resources: Limited resources, like outdated charts, hinder teaching. Lack of science materials on trade affects instruction, requiring investment for improved educational quality.

14. Examine the importance of the syllabus to a Geography Teacher

Curriculum Guidance: One importance is curriculum guidance, outlining topics. Syllabi detail pollution studies, ensuring systematic science teaching and educational alignment with goals for teachers.

Assessment Planning: Syllabi aid assessment planning, setting standards. They specify science tests on resources, enhancing teaching quality and student evaluation through structured objectives.

Resource Allocation: They guide resource allocation, listing needs. Syllabi ensure charts for ecosystems are available, supporting science instruction and effective learning processes for teachers.

Professional Development: Syllabi support professional growth, deepening insight. Studying science content prepares teachers for resource management, improving teaching effectiveness and educational outcomes.

SECTION C (20 Marks)

Answer two (2) questions from this section.

15. (a) What is meant by the term ‘lesson plan’?

A lesson plan is a structured outline for teaching, detailing objectives, like resource management, ensuring organized science instruction and educational effectiveness for student learning.

15. (b) Prepare a lesson plan for teaching form one (1) students for 45 minutes on the sub-topic “Rotation of the earth around its axis”

Subject: General Science

Topic: Rotation of the Earth Around Its Axis

Class: Form One

Duration: 45 minutes

Specific Objective: By the end of the lesson, students will understand the concept of Earth’s rotation, its effects on day and night, and its impact on daily life, enhancing their science education.

Lesson Outline:

Introduction (10 minutes)

Greet students and motivate with a question: “Why do we have day and night?” Use a globe to show Earth’s rotation, linking to science concepts to engage learners and set the stage for learning.

Explain the basic concept of rotation, using simple terms to ensure clarity and science interest, preparing students for effective instruction.

Main Lesson (25 minutes)

Explanation (10 minutes): Describe Earth’s rotation on its axis, using a diagram. Discuss how it causes day and night, connecting to science cycles, enhancing student comprehension and teaching effectiveness.

Demonstration (10 minutes): Use a rotating model to show the process, asking students to predict day-night patterns. Engage them with questions on science impacts, reinforcing learning and instructional quality.

Discussion (5 minutes): Facilitate a brief discussion on rotation effects, like time zones. Encourage science-related questions, boosting student participation and educational outcomes through interactive teaching.

Conclusion and Assessment (10 minutes)

Summarize key points, revisiting rotation effects on daily life. Use a quick quiz: “What causes day and night?” to assess understanding, ensuring science learning goals are met and teaching effectiveness is evaluated.

Assign homework: Draw and label Earth’s rotation, preparing students for future science lessons and reinforcing educational progress through practical application.

Resources: Globe, diagram, model of Earth, whiteboard.

Assessment: Quiz responses and class participation, ensuring students grasp rotation concepts and science education objectives.

16. Identify and explain four appropriate strategies which can be used for teaching and learning practical science

Demonstrations: One strategy is demonstrations, showing processes. Teachers use models to illustrate chemical reactions, enhancing science understanding and teaching effectiveness through clear, visual learning.

Hands-On Experiments: Conducting experiments engages students. Students mix solutions, improving science skills and educational outcomes through practical application and interactive teaching.

Group Work: Facilitating group work fosters collaboration. Students analyze data together, boosting science communication and teaching quality through peer learning and problem-solving.

Field Trips: Organizing field trips provides real-world context. Visiting science labs exposes students to applications, enhancing learning outcomes and instructional effectiveness through experiential education.

17. Write a lesson plan demonstrating application of think-pair-share teaching and learning technique

Subject: General Science

Topic: Photosynthesis

Class: Form Two

Duration: 45 minutes

Specific Objective: By the end of the lesson, students will explain the process of photosynthesis, its importance to life, and apply it to plant growth, enhancing their science education.

Lesson Outline:

Introduction (10 minutes)

Greet students and pose a question: "Why are plants green?" Use a chart to introduce photosynthesis, engaging science learners and setting the stage for effective instruction.

Briefly explain photosynthesis basics, ensuring clarity and science interest, preparing students for interactive learning through think-pair-share.

Main Lesson (25 minutes)

Think (5 minutes): Ask students to individually think about photosynthesis components, like sunlight and carbon dioxide. They jot down ideas, enhancing science focus and personal reflection in education.

Pair (10 minutes): Pair students to discuss their ideas, sharing insights on plant processes. They compare science notes, improving collaboration and teaching effectiveness through peer interaction.

Share (10 minutes): Groups share findings with the class, discussing photosynthesis' role in life. Teachers facilitate, boosting science engagement and educational outcomes through collective learning.

Conclusion and Assessment (10 minutes)

Summarize key points, emphasizing photosynthesis' science importance. Use a quick question: "What gases are involved in photosynthesis?" to assess understanding, ensuring teaching goals are met and learning is effective.

Assign homework: Research one plant benefit from photosynthesis, reinforcing science education and student progress through practical application and reflection.

Resources: Chart, whiteboard, handouts.

Assessment: Class participation and responses during share, ensuring students grasp photosynthesis concepts and science education objectives.

18. Analyze the importance of assessment in science subject

Identifying Gaps: One importance is identifying learning gaps, guiding improvement. Science tests on chemical reactions reveal weaknesses, enhancing educational strategies and teaching effectiveness through targeted support.

Measuring Progress: Assessment measures progress, tracking outcomes. Science quizzes on physics evaluate growth, supporting learning and teaching quality through feedback for student advancement.

Motivating Students: It motivates students, encouraging effort. Science scores on biology inspire participation, boosting engagement and educational progress in classrooms through achievement recognition.

Ensuring Accountability: Assessment ensures teacher accountability, maintaining standards. Science evaluations on chemistry assess instruction, supporting teaching effectiveness and educational stability through performance monitoring.

Personalizing Learning: It personalizes learning, addressing needs. Science tests on astronomy tailor lessons, improving teaching outcomes and student achievement through customized educational approaches.