THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL OF TANZANIA

DIPLOMA IN SECONDARY EDUCATION EXAMINATION

713 GEOGRAPHY

Time: 3 Hours **ANSWERS** **Year: 2012**

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. Suggest three ways that will enable a Geography teacher to avoid halo effect in assessment

Diverse Assessment Methods: One way is using diverse methods, like tests and projects. Varying science evaluations on soil texture reduces bias, ensuring fair geography assessment and teaching effectiveness.

Clear Criteria: Establishing clear, specific criteria prevents bias. Defining science standards for earthquakes ensures objective geography grading, enhancing educational fairness and student outcomes.

Independent Marking: Marking independently, without prior knowledge, avoids bias. Geography teachers assess tourism essays anonymously, improving accuracy and science education equity in classrooms.

2. Enumerate three factors which cause population explosion in urban areas

Economic Opportunities: One factor is economic opportunities, attracting jobs. Urban science industries draw people, increasing population and straining geographic resources, necessitating urban planning studies.

Better Services: Improved services, like healthcare, boost urban growth. Access to science education in cities attracts residents, impacting geographic population density and development challenges.

Rural Push Factors: Rural challenges, like poverty, push migration. Lack of science agriculture jobs drives people to cities, increasing urban population and requiring geography education on migration patterns.

3. Identify one push factor and two pull factors of rural-urban migration

Push Factor – Poverty: One push factor is poverty, limiting rural resources. Lack of science farming income drives migration, impacting geographic settlement patterns and necessitating development strategies.

Pull Factor – Jobs: One pull factor is job opportunities, attracting migrants. Urban science industries offer work, boosting geographic urban growth and economic stability through migration.

Pull Factor – Education: Better education access pulls people to cities. Urban science schools enhance learning, driving geographic population shifts and educational outcomes through migration benefits.

4. By giving one example, state three qualities of a good Geography specific instructional objective

Clarity: One quality is clarity, stating objectives precisely. “Students will identify three soil types” ensures clear goals, enhancing geography teaching focus and science education outcomes, exemplified by soil lessons.

Measurability: Measurability allows assessment, a key quality. “Students will map two drainage patterns” enables evaluation, improving geography instruction and science learning effectiveness, as seen in river studies.

Relevance: Relevance to curriculum goals is essential. “Students will analyze earthquake impacts” aligns with geography standards, supporting science education and teaching quality, demonstrated in seismic lessons.

5. Outline three problems facing the implementation of population policy

Funding Shortages: One problem is funding shortages, limiting resources. Insufficient budgets for science population programs hinder policy execution, challenging geographic development and stability.

Cultural Resistance: Cultural norms oppose policy changes, hindering progress. Traditional views on family size resist science education initiatives, impacting geographic population management efforts.

Lack of Awareness: Limited awareness reduces policy effectiveness. Insufficient science outreach on population strategies limits adoption, necessitating geography education to improve understanding and implementation.

6. Briefly explain three uses of test scores in Geography

Assessment of Learning: One use is assessing learning, measuring outcomes. Test scores on soil texture evaluate geography knowledge, enhancing science education and teaching effectiveness through feedback.

Identifying Gaps: They identify learning gaps, guiding improvement. Scores on earthquakes highlight weaknesses, supporting geography instruction and science strategies for student progress in classrooms.

Curriculum Evaluation: Test scores evaluate curricula, ensuring quality. Geography results on tourism assess teaching methods, improving science education standards and geographic instructional planning.

7. Outline three types of land survey

Topographic Survey: One type is topographic survey, mapping land features. It measures science elevations for geography, aiding land use planning and educational studies on terrain.

Cadastral Survey: Cadastral survey defines property boundaries. It supports science land ownership, enhancing geography education on resource management and spatial organization.

Geodetic Survey: Geodetic survey measures Earth’s shape, using science coordinates. It improves geography accuracy for mapping, supporting teaching and learning on global landforms.

8. List three reasons which make Geography to be considered as a multi-discipline

Integration with Science: One reason is integration with science, studying physical processes. Geography analyzes soil science for agriculture, linking disciplines, enhancing educational breadth and teaching effectiveness.

Connection to History: Geography connects to history, examining human patterns. It explores settlement history, supporting interdisciplinary learning and geography’s multi-disciplinary nature in classrooms.

Link to Economics: It links to economics, analyzing resource use. Geography studies trade in tourism, integrating economic principles, broadening scope and educational impact across subjects.

9. Explain three benefits of using a Geography lesson plan

Organization: One benefit is organization, structuring lessons. Plans outline soil texture topics, ensuring systematic geography teaching and science education efficiency for teachers.

Time Management: Lesson plans ensure time management, scheduling activities. They allocate periods for earthquake studies, enhancing geography teaching productivity and student progress in classrooms.

Resource Allocation: Plans guide resource allocation, listing needs. They specify maps for tourism, ensuring geography teachers have materials, improving teaching effectiveness and learning outcomes.

10. Show three ways you can use in teaching volcanic process to form three classes

Demonstration: One way is demonstration, using models. Teachers show science volcanic diagrams, engaging geography students across classes, enhancing teaching effectiveness and learning outcomes.

Discussion: Facilitating discussion reinforces learning. Geography classes debate volcanic impacts, improving science inquiry and teaching quality through interactive strategies for all groups.

Field Trip: Organizing field trips to volcanic sites provides experience. Geography students explore science landscapes, boosting engagement and educational outcomes across classes through hands-on learning.

SECTION B (30 Marks)

Answer two (2) questions from this section.

11. Elaborate six uses of underground water

Drinking Supply: One use is providing drinking water, ensuring hydration. Underground sources supply science hydration for communities, supporting geographic health and development through reliable resources.

Irrigation: It supports irrigation, aiding agriculture. Underground water irrigates science crops, enhancing geographic productivity and food security through sustainable farming practices.

Industrial Use: Industries use it for processes, boosting production. Science manufacturing relies on water, improving geographic economic stability and development through resource availability.

Aquaculture: Underground water supports aquaculture, raising fish. It sustains science aquatic systems, enhancing geographic biodiversity and economic growth through environmental management.

Cooling Systems: It cools machinery, ensuring efficiency. Underground water supports science tech operations, improving geographic industrial productivity and sustainability through resource use.

Recreation: It supplies recreational areas, like spas. Underground sources enhance science tourism, boosting geographic economic benefits and community development through water-based activities.

12. Explain six factors to be considered before construction of Hydroelectric Power (H.E.P) dam

Environmental Impact: One factor is environmental impact, assessing ecosystems. Evaluating science wildlife effects ensures geographic sustainability, minimizing disruption and supporting development.

Geological Stability: Geological conditions, like rock stability, are crucial. Assessing science fault lines prevents dam failure, enhancing geographic safety and energy project reliability.

Water Availability: Sufficient water flow ensures power generation. Measuring science river volumes supports geographic planning, optimizing hydroelectric efficiency and development outcomes.

Economic Feasibility: Cost-effectiveness guides construction. Analyzing science investment returns ensures geographic economic viability, supporting sustainable energy and community growth.

Social Impact: Community effects, like displacement, must be considered. Assessing science resettlement needs enhances geographic equity, ensuring development benefits all through inclusive planning.

Regulatory Approval: Compliance with laws ensures legality. Securing science permits supports geographic project legitimacy, maintaining stability and effective energy development initiatives.

13. Power rationing has been a common phenomenon in most developing countries. What should be done to rectify the situation? Give four ways

Invest in Renewable Energy: One way is investing in renewable energy, like solar. Expanding science power sources reduces reliance on limited grids, enhancing geographic stability and development through sustainable energy.

Improve Infrastructure: Upgrading power infrastructure, like grids, addresses shortages. Enhancing science transmission systems ensures reliable electricity, supporting geographic economic growth and community needs.

Energy Conservation: Promoting conservation, like efficient use, reduces demand. Educating on science energy-saving practices supports geographic sustainability, stabilizing power supply and development.

Public-Private Partnerships: Collaborating with private sectors boosts capacity. Science energy projects with companies enhance geographic power availability, rectifying rationing and supporting economic progress.

14. Explain three advantages and three disadvantages of nuclear energy

Advantages:

Low Carbon Emissions: One advantage is low carbon emissions, reducing pollution. Nuclear energy supports science sustainability, enhancing geographic environmental health and development through clean power.

High Energy Output: It provides high energy output, meeting needs. Nuclear plants supply science electricity efficiently, boosting geographic economic stability and industrial growth.

Reliable Supply: Nuclear offers reliable power, ensuring consistency. It supports science operations continuously, enhancing geographic energy security and teaching effectiveness in education.

Disadvantages:

Radiation Risks: One disadvantage is radiation risks, threatening health. Nuclear accidents impact science communities, necessitating geographic safety measures and environmental management.

High Costs: Nuclear energy has high costs, like construction. Science facility expenses strain budgets, challenging geographic economic feasibility and development sustainability.

Waste Disposal: Managing nuclear waste poses challenges. Science disposal issues affect geography, requiring careful planning to ensure environmental stability and long-term safety in communities.

SECTION C (40 Marks)

Answer two (2) questions from this section.

15. (i) Explain five stages to follow when preparing to teach a topic of environmental conservation for form three students

Needs Assessment: One stage is needs assessment, identifying gaps. Evaluating science student knowledge on soil erosion ensures relevant geography lessons, enhancing teaching effectiveness and learning outcomes.

Objective Setting: Setting clear objectives follows, defining goals. Outlining science conservation aims, like reducing deforestation, improves geography instruction and student engagement in classrooms.

Content Selection: Selecting content, like biodiversity, is crucial. Choosing science topics on ecosystems supports geography education, ensuring comprehensive teaching and environmental understanding.

Method Planning: Planning methods, like discussions, enhances delivery. Using science field trips for conservation teaches geography effectively, boosting student participation and learning progress.

Resource Preparation: Preparing resources, like charts, ensures readiness. Gathering science materials for geography lessons supports teaching quality and environmental education outcomes for students.

15. (ii) Suggest three techniques of teaching that topic

Field Trips: One technique is field trips, providing hands-on learning. Visiting science conservation sites teaches geography, enhancing student engagement and environmental understanding through practical experience.

Group Discussions: Facilitating group discussions fosters collaboration. Students debate science ecosystem issues, improving geography inquiry and teaching effectiveness through interactive learning.

Demonstrations: Using demonstrations, like models, clarifies concepts. Showing science soil erosion processes teaches geography, boosting comprehension and instructional quality in classrooms.

16. Elaborate six factors to show contributions of assessment in effective teaching and learning process

Identifying Gaps: One factor is identifying learning gaps, guiding improvement. Geography tests on earthquakes reveal weaknesses, enhancing science education and teaching strategies through targeted support.

Measuring Progress: Assessment measures progress, tracking outcomes. Geography quizzes on soil texture evaluate growth, supporting science learning and teaching effectiveness through feedback.

Motivating Students: It motivates students, encouraging effort. Geography scores on tourism inspire participation, boosting science engagement and educational progress in classrooms.

Enhancing Curriculum: Assessment improves curricula, refining content. Geography results on rivers guide adjustments, enhancing science education quality and teaching relevance through data-driven planning.

Ensuring Accountability: It ensures teacher accountability, maintaining standards. Geography evaluations on volcanicity assess instruction, supporting science teaching effectiveness and educational stability.

Personalizing Learning: Assessment personalizes learning, addressing needs. Geography tests on drainage patterns tailor science lessons, improving teaching outcomes and student achievement through customized approaches.

17. Analyse four types of evaluation and explain one use of each type

Formative Evaluation: One type is formative, assessing during learning. It monitors science geography lessons on soil, guiding adjustments, enhancing teaching effectiveness and student progress through ongoing feedback.

Summative Evaluation: Summative evaluates at lesson end, measuring outcomes. It assesses science geography tests on earthquakes, determining achievement, supporting teaching quality and educational assessment.

Diagnostic Evaluation: Diagnostic identifies pre-existing knowledge, like gaps. It analyzes science geography skills on rivers, informing teaching strategies, improving learning outcomes through targeted instruction.

Norm-Referenced Evaluation: Norm-referenced compares students, ranking performance. It ranks science geography scores on tourism, guiding teaching priorities, enhancing educational equity and classroom management.

18. (a) Show five types of instruments used in a weather station

Thermometer: One instrument measures temperature, supporting science weather data. It aids geography education, enhancing teaching and learning on climate through accurate records.

Rain Gauge: A rain gauge measures precipitation, tracking science rainfall. It supports geography studies, improving teaching effectiveness on weather patterns and environmental management.

Anemometer: An anemometer measures wind speed, recording science conditions. It enhances geography learning, supporting teaching on climate dynamics and weather forecasting in classrooms.

Barometer: A barometer measures air pressure, assessing science weather. It aids geography instruction, improving student understanding of atmospheric science and geographic stability.

Hygrometer: A hygrometer measures humidity, monitoring science moisture. It supports geography education, enhancing teaching on weather systems and environmental science through precise data.

18. (b) Explain four stages involved in establishment of a weather station in a school setting

Site Selection: One stage is site selection, choosing an open area. Identifying a location for science weather equipment ensures accurate geography data, supporting teaching and learning effectiveness.

Equipment Procurement: Procuring instruments, like thermometers, follows. Acquiring science tools for weather monitoring enhances geography education, ensuring reliable instructional resources.

Installation: Installing equipment, like rain gauges, is next. Setting up science devices in geography rooms supports data collection, improving teaching accuracy and student engagement.

Training: Training staff on usage prepares for operation. Teaching geography educators science weather monitoring builds skills, ensuring effective instruction and classroom management.