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NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
ADVANCED CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

113/2

GEOGRAPHY 2

(For Both School and Private Candidates)

Time: 3 Hours

ANSWERS

Year: 2007

Instructions

1. This paper consists of seven questions.
2. Answer a total of five questions, question number 1 is compulsory.

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1. Discuss the limiting factors towards transforming the East African traditional livestock keeping to commercial livestock keeping.

Limited access to modern veterinary services affects livestock health and productivity. Many pastoral communities lack access to vaccinations, disease treatment, and veterinary experts, leading to high mortality rates and reduced livestock quality. Diseases such as Foot and Mouth Disease and Rift Valley Fever reduce commercial viability.

Poor infrastructure and market access hinder the transition to commercial livestock keeping. Many pastoral areas in East Africa lack roads, storage facilities, and organized markets. This makes it difficult for livestock keepers to transport their animals to major markets, leading to low sales and profits.

Inadequate financial support and capital investment limit commercial livestock expansion. Most pastoralists operate at a subsistence level and lack access to loans or grants needed to invest in high-quality breeds, animal feeds, and modern livestock facilities. Without financial support, commercializing livestock becomes challenging.

Climate change and environmental degradation pose serious threats to livestock keeping. Droughts, unpredictable rainfall, and desertification in regions such as northern Kenya and central Tanzania reduce pasture availability, forcing herders to migrate frequently. This instability makes it difficult to establish commercial livestock farms.

Cultural resistance to change slows down commercial livestock adoption. Many pastoral communities consider cattle as a symbol of wealth and prestige rather than an economic asset for sale. They prioritize herd size over productivity, making commercialization difficult.

Land tenure and grazing conflicts reduce opportunities for commercial livestock production. In many parts of East Africa, land ownership disputes and encroachment on grazing lands by farmers lead to conflicts, affecting livestock production. Lack of designated grazing areas makes commercial investment risky.

Limited adoption of improved livestock breeds reduces productivity. Many traditional livestock keepers continue to rear indigenous breeds, which have lower milk and meat yields compared to improved breeds. The lack of knowledge and resources to adopt better breeds hinders commercialization.

Poor livestock feeding practices limit growth potential. Many pastoralists rely on natural grazing rather than formulated feeds, leading to seasonal fluctuations in animal health and production. Commercial livestock keeping requires consistent feeding programs, which are often unavailable in traditional settings.

2. (a) What do you understand by “Multipurpose Scheme”?

A Multipurpose Scheme is a large-scale development project designed to serve multiple economic and social purposes simultaneously. These schemes typically involve large infrastructure projects such as dams,

irrigation systems, hydroelectric plants, and flood control measures, benefiting different sectors of the economy.

For example, the Aswan High Dam in Egypt serves multiple purposes, including hydroelectric power generation, irrigation for agriculture, and flood control. Similarly, the Three Gorges Dam in China provides electricity, controls flooding, and improves navigation along the Yangtze River.

(b) Explain the significance of River Rhine to the economic development of Europe.

Industrial and commercial transportation is one of the major roles of the River Rhine. It serves as a key trade route connecting major industrial cities in Germany, France, and the Netherlands. The river facilitates the movement of raw materials such as coal, iron ore, and petroleum, supporting industries in cities like Rotterdam and Cologne.

Hydroelectric power generation along the Rhine provides renewable energy for industries and households. Several dams along the river harness water power to generate electricity, reducing dependence on fossil fuels and promoting sustainable energy development.

Agricultural irrigation benefits from the Rhine's water supply. The river supports farming in lowland areas of Germany and the Netherlands, where irrigation is essential for crop production. This enhances food security and agricultural exports.

Tourism and recreation contribute to economic growth. The Rhine Valley is famous for its scenic beauty, attracting tourists for river cruises, historical site visits, and wine production in regions such as the Rhine Gorge. Tourism-related activities generate employment and revenue for local businesses.

Environmental conservation efforts along the Rhine have improved water quality and biodiversity. The Rhine Action Program has helped reduce industrial pollution, protecting aquatic life and ensuring a sustainable water supply for European cities.

3. Assess the consequences of oil crisis in the world and suggest ways to overcome it.

Consequences of the oil crisis:

Economic instability and inflation occur when oil prices rise sharply. Since oil is a major input in transportation, manufacturing, and energy production, high prices lead to increased costs of goods and services. Many developing countries struggle with inflation and economic slowdowns during oil crises.

Energy shortages and reduced industrial production happen in countries heavily dependent on oil imports. High oil prices force businesses and factories to cut production, leading to job losses and economic recessions, as seen during the 1973 oil crisis.

Increased cost of transportation affects consumers and businesses. High fuel prices raise the cost of public and private transportation, making travel more expensive and affecting global trade. Aviation, shipping, and logistics industries are especially vulnerable.

Geopolitical conflicts and tensions arise as countries compete for oil resources. Many wars and diplomatic disputes, such as those in the Middle East, have been linked to oil supply struggles. Countries with large oil reserves gain political influence, while oil-dependent nations face economic uncertainty.

Ways to overcome the oil crisis:

Investment in renewable energy sources such as solar, wind, and hydroelectric power can reduce dependence on oil. Countries like Germany and China are increasing their reliance on renewable energy to secure long-term energy stability.

Promotion of energy efficiency and conservation can lower oil consumption. Policies encouraging fuel-efficient vehicles, public transportation, and energy-saving appliances help reduce demand for oil.

Diversification of energy supply through biofuels, nuclear energy, and natural gas reduces reliance on crude oil. Many countries are exploring alternative energy sources to minimize the impact of oil price fluctuations.

Strengthening global energy cooperation ensures stable oil supply. International agreements between oil-producing and consuming nations can help manage production levels and stabilize prices.

4. With reference to rubber plantation in Liberia, examine the merits of plantation farming.

High economic productivity is one of the main benefits of plantation farming. Rubber plantations in Liberia contribute significantly to the country's export revenue, providing foreign exchange earnings that support national development.

Employment creation is another advantage. Plantation farming requires a large labor force for planting, harvesting, and processing. Many Liberians rely on rubber plantations for jobs, reducing unemployment rates in rural areas.

Technological advancement and mechanization improve efficiency in large-scale plantations. Rubber plantations use modern machinery and farming techniques that increase productivity and reduce manual labor costs.

Foreign investment and industrial development are promoted through plantation farming. Companies like Firestone and Bridgestone have invested in Liberia's rubber industry, leading to the establishment of processing plants and infrastructure development.

Improved infrastructure such as roads, housing, and schools often accompany plantation farming. Large plantation companies invest in local development projects, improving living standards for surrounding communities.

5. Discuss the problems facing air transportation in Africa.

High operational costs make air travel expensive in Africa. Fuel prices, airport taxes, and aircraft maintenance costs are higher compared to other regions, making flights unaffordable for many travelers.

Poor infrastructure and outdated airports limit air transport efficiency. Many African airports lack modern facilities, efficient runways, and advanced air traffic control systems, leading to flight delays and safety concerns.

Lack of skilled aviation professionals affects the quality of air transportation. Many African countries have shortages of trained pilots, engineers, and air traffic controllers, making it difficult to maintain reliable airline services.

Weak airline profitability due to low passenger demand and competition from foreign airlines affects the growth of domestic airlines. Many African carriers struggle financially, leading to frequent airline shutdowns.

Political instability and security concerns discourage investment in air transportation. Issues such as terrorism, hijackings, and weak border control measures create risks for airlines operating in Africa.

6. Discuss the factors influencing fertility regulation

Fertility regulation is influenced by multiple factors, including social, economic, and health-related considerations. One of the key determinants is the level of education among women. In societies where women have access to higher education, fertility rates tend to be lower because educated women often delay marriage and childbirth to focus on career development and financial stability. In contrast, in rural areas with limited education opportunities, fertility rates remain high as early marriages and large families are common.

Access to family planning services plays a crucial role in fertility regulation. Availability of contraceptives, reproductive health education, and medical facilities allow individuals to make informed decisions about childbearing. In developing countries where contraceptives are scarce or stigmatized, birth rates tend to be higher due to unplanned pregnancies.

Cultural and religious beliefs also influence fertility regulation. In many traditional African societies, having many children is considered a sign of wealth and social status. Certain religious teachings discourage the use of contraception, leading to high birth rates in some communities. On the other hand, societies that promote smaller family sizes and gender equality tend to have better fertility regulation.

Economic factors, such as the cost of raising children, affect family planning decisions. In urban areas, where the cost of education, healthcare, and housing is high, couples may choose to have fewer children to

maintain a better quality of life. In contrast, rural populations, where children are often seen as a labor force for farming, tend to have higher fertility rates.

Government policies and incentives can either encourage or discourage high fertility rates. Countries facing population decline may offer financial incentives for childbirth, while those experiencing overpopulation may implement policies that promote contraceptive use and reproductive health education. China's past one-child policy is an example of state intervention in fertility regulation.

Health-related factors, such as maternal and infant mortality rates, also influence fertility regulation. In areas where child mortality rates are high, families may have more children as a survival strategy. Improved healthcare services and reduced child mortality often lead to lower fertility rates, as parents become confident that their children will survive to adulthood.

Urbanization and modernization have led to lifestyle changes that affect fertility. People living in cities are more likely to delay marriage and childbirth due to career commitments and changing social norms. As urban populations grow, fertility rates tend to decline compared to rural areas.

Fertility regulation is a complex issue that is shaped by a combination of education, access to healthcare, cultural norms, economic conditions, and government policies. Effective strategies for regulating fertility must consider these factors to ensure balanced population growth and economic development.

7. (a) What is family planning? Is it worth encouraging it?

Family planning refers to the practice of controlling the number and spacing of children through the use of contraceptive methods, education, and healthcare services. It enables individuals and couples to make informed decisions about reproduction, improving their overall well-being and economic stability.

Encouraging family planning has several benefits. It helps reduce poverty by allowing families to have a manageable number of children that they can adequately provide for in terms of food, education, and healthcare. Smaller families generally experience a higher quality of life compared to larger families struggling with limited resources.

Family planning improves maternal and child health by preventing high-risk pregnancies. Closely spaced pregnancies increase the risk of maternal complications and infant mortality. By allowing mothers to recover between births, family planning enhances the health of both mothers and children.

It contributes to gender equality by enabling women to pursue education and careers before having children. Women who have control over their reproductive choices are more likely to participate in the workforce and achieve economic independence.

From an economic perspective, family planning reduces the burden on government resources. Countries with high birth rates often struggle to provide adequate healthcare, education, and social services. By regulating fertility, governments can allocate resources more effectively and improve overall living standards.

Environmentally, family planning helps mitigate overpopulation-related problems such as deforestation, pollution, and resource depletion. With a growing global population, managing birth rates ensures sustainable development and reduces pressure on natural resources.

Encouraging family planning is essential for achieving social, economic, and environmental sustainability. Governments and organizations should invest in reproductive health programs, education, and access to contraception to promote informed family planning decisions.

(b) Give an account of the family planning methods and devices used

There are several methods of family planning, broadly classified into natural, barrier, hormonal, surgical, and emergency contraception methods.

Natural methods involve tracking fertility cycles to avoid pregnancy. The calendar method, basal body temperature method, and withdrawal method (coitus interruptus) fall into this category. While these methods have no medical side effects, they require careful monitoring and are less reliable than modern contraceptive methods.

Barrier methods physically prevent sperm from reaching the egg. Condoms, diaphragms, and cervical caps are commonly used barrier devices. Male and female condoms not only prevent pregnancy but also protect against sexually transmitted infections (STIs), making them highly recommended for reproductive health.

Hormonal methods regulate ovulation and fertility through synthetic hormones. Birth control pills, contraceptive injections (Depo-Provera), hormonal implants, and intrauterine devices (IUDs) alter a woman's hormonal balance to prevent pregnancy. These methods are highly effective but may have side effects such as weight gain, mood swings, or menstrual irregularities.

Surgical methods provide permanent contraception. Tubal ligation (female sterilization) and vasectomy (male sterilization) prevent fertilization by blocking the fallopian tubes or sperm ducts, respectively. These methods are ideal for couples who no longer wish to have children.

Emergency contraception, such as the morning-after pill, is used after unprotected intercourse to prevent pregnancy. This method is not a regular form of contraception but serves as a backup in cases of contraceptive failure or sexual assault.

Each method has its advantages and disadvantages, and individuals should choose based on their health, personal preferences, and family planning goals. Access to family planning services and proper education about contraceptive options are crucial for effective reproductive health management.

Encouraging the use of diverse family planning methods helps individuals take control of their reproductive health, contributing to improved quality of life and sustainable population growth.

8. “The Participation of Tanzania in different regional economic integrations is detrimental to her economy.” Critically assess this contention.

Tanzania's participation in regional economic integrations such as the East African Community (EAC), the Southern African Development Community (SADC), and the African Continental Free Trade Area (AfCFTA) has both positive and negative impacts on its economy.

One major benefit of regional economic integration is market expansion. By participating in these agreements, Tanzania gains access to larger markets, allowing local businesses to trade more easily with neighboring countries. This increases trade volumes and encourages industrial growth. For example, Tanzanian agricultural products such as maize and rice find markets in Kenya and Uganda under the EAC framework.

Another advantage is foreign investment attraction. Investors are more likely to put their money into economies that are part of stable regional blocs. Economic integration ensures that Tanzania benefits from joint infrastructure projects, trade agreements, and financial investments, boosting its economic growth.

Regional infrastructure development is another positive outcome. Membership in economic blocs enables Tanzania to benefit from regional road networks, railways, and ports that improve connectivity and enhance trade efficiency. Projects such as the Central Corridor, which links Tanzania to landlocked countries like Rwanda and Burundi, are supported by regional economic partnerships.

However, participation in economic integrations also comes with challenges. One major problem is unequal competition. More developed economies, such as Kenya and South Africa, dominate regional trade, making it difficult for Tanzanian industries to compete. Local businesses may suffer from the influx of cheaper foreign products, leading to economic imbalances.

Revenue loss due to tariff reductions is another concern. As regional agreements require the removal of trade barriers and import taxes, Tanzania loses significant government revenue that would have been collected from tariffs. This affects national budgets and limits government spending on public services.

Dependence on external economies can also weaken Tanzania's local production. If the country becomes too reliant on imported goods from regional partners, local industries may struggle to develop, leading to job losses and economic instability.

Policy conflicts arise when Tanzania's national interests clash with regional agreements. Sometimes, local industries require protection, but regional economic rules prevent governments from imposing protective tariffs or subsidies. This limits the country's ability to implement independent economic policies.

In conclusion, while Tanzania's participation in regional economic integrations offers significant benefits, such as market expansion, investment attraction, and infrastructure development, it also poses challenges such as unequal competition, revenue loss, and policy conflicts. The government must implement strategies to ensure that regional integration benefits local industries while minimizing economic disadvantages.

9. Explain the mutual advantages that the ACP and members of the EU get from their cooperation.

The African, Caribbean, and Pacific (ACP) group and the European Union (EU) maintain a long-standing partnership that benefits both regions in various ways.

One major benefit for ACP countries is preferential trade agreements. The EU grants ACP nations duty-free and quota-free access to European markets for goods such as agricultural products, textiles, and minerals. This helps ACP countries earn foreign exchange and develop their export sectors.

Development aid and financial support from the EU help ACP countries improve infrastructure, healthcare, and education. Through programs such as the European Development Fund (EDF), the EU provides funding for economic and social projects, improving the quality of life in ACP countries.

ACP nations also benefit from technology transfer and capacity building. The EU supports knowledge-sharing programs that enhance skills development, research, and innovation in ACP regions, particularly in agriculture and industrialization.

For the EU, cooperation with ACP countries provides access to raw materials. Many ACP nations are rich in natural resources such as oil, minerals, and agricultural products, which European industries depend on for production. Ensuring stable trade relationships with ACP countries secures the EU's supply of essential goods.

Political and diplomatic influence is another advantage for the EU. By engaging with ACP countries, the EU strengthens its global political standing and expands its influence in international trade and governance.

The EU also benefits from expanded markets for European products and investments. ACP countries import European goods such as machinery, pharmaceuticals, and technology, creating demand for European industries and boosting the EU economy.

Additionally, collaboration in security and migration control is mutually beneficial. The EU works with ACP nations to address challenges such as illegal migration, terrorism, and regional conflicts, promoting stability and reducing security threats.

Overall, ACP-EU cooperation fosters economic growth, trade development, political stability, and mutual prosperity, making it a beneficial partnership for both regions.

10. Identify non-renewable energy resources and show their merits and demerits.

Non-renewable energy resources are those that cannot be replenished within a human lifespan. These include coal, oil, natural gas, and nuclear energy.

Coal is one of the most widely used non-renewable energy sources. Merits of coal include its abundance and affordability, as many countries have large reserves. It is also reliable for electricity generation and industrial use. However, coal has severe environmental impacts, including high carbon emissions, which contribute to climate change, and air pollution, leading to respiratory diseases.

Oil is essential for transportation, manufacturing, and energy production. It is easily transportable and has a high energy density, making it highly efficient. However, oil dependence leads to economic instability, as price fluctuations affect global markets. Oil extraction and spills also cause severe environmental damage, particularly to marine ecosystems.

Natural gas is considered the cleanest fossil fuel, producing lower emissions than coal and oil. It is efficient for electricity generation and heating. However, natural gas extraction through fracking can cause earthquakes and groundwater contamination. Additionally, natural gas is still a contributor to greenhouse gas emissions, which affects global warming.

Nuclear energy provides high efficiency and large-scale electricity production. It does not produce direct carbon emissions, making it an alternative to fossil fuels. However, nuclear power has major risks, including nuclear accidents, such as the Chernobyl disaster, and the challenge of radioactive waste disposal.

11. Explain the causes and effects of environmental pollution in African cities.

Environmental pollution in African cities results from rapid urbanization, industrialization, and poor waste management.

One major cause of pollution is industrial emissions. Many African cities have factories that release large amounts of smoke, chemical waste, and toxins into the air and water bodies. Poor regulation of industrial activities leads to severe air and water pollution, particularly in cities like Lagos and Nairobi.

Vehicular emissions contribute to air pollution. The increasing number of cars, buses, and motorcycles in cities leads to high levels of carbon monoxide and other pollutants. Traffic congestion in cities like Dar es Salaam and Johannesburg worsens air quality, causing respiratory diseases.

Poor waste disposal and sanitation create environmental hazards. Many African cities lack proper garbage collection systems, leading to illegal dumping of waste in streets, rivers, and open spaces. Inadequate sewage systems contribute to water contamination and disease outbreaks.

Deforestation and land degradation result from expanding urban settlements. The destruction of green spaces and forests for construction projects reduces air quality and increases the risk of soil erosion and flooding.

Effects of environmental pollution in African cities:

Health problems such as respiratory diseases, lung infections, and skin conditions arise from exposure to polluted air and water. Airborne pollutants increase cases of asthma and bronchitis, particularly among children and the elderly.

Water contamination leads to the spread of diseases such as cholera, typhoid, and dysentery. Many African cities suffer from inadequate clean water supply, forcing people to use polluted sources.

Decline in agricultural productivity occurs due to soil and water pollution. Heavy metals and chemical waste from industries make land unsuitable for farming, reducing food production.

Loss of biodiversity results from habitat destruction and pollution. Rivers, lakes, and forests around cities experience declining fish populations, deforestation, and ecosystem imbalance.

Climate change acceleration is a major concern. Greenhouse gas emissions from industries, vehicles, and waste contribute to global warming, leading to extreme weather conditions and environmental disasters.

Addressing pollution in African cities requires strong policies, investment in clean energy, improved waste management, and environmental education to promote sustainable urban development.