

**THE UNITED REPUBLIC OF TANZANIA**  
**NATIONAL EXAMINATIONS COUNCIL OF TANZANIA**  
**CERTIFICATE OF SECONDARY EDUCATION EXAMINATION**  
**735 AGRICULTURE TEACHING METHODS**

**Time: 3 Hours**

**ANSWERS**

**Year: 2018**

**Instructions**

1. This paper consists of section A and B with a total of sixteen questions.
2. Answer all questions in section A and four questions from section B.

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1. Name four teaching strategies that fall under participatory method.

Discussion method allows students to actively engage with each other and the teacher by sharing ideas, debating concepts, and clarifying misunderstandings. This method fosters critical thinking and enhances collaborative learning.

Problem-solving method encourages students to find solutions to given problems through research, group work, and logical reasoning. It helps develop analytical skills and practical application of knowledge.

Role-playing method involves students acting out scenarios related to the subject matter. This strategy enhances comprehension by allowing learners to experience real-life situations and develop communication skills.

Project-based learning requires students to work on extended tasks that involve research, creativity, and presentation of findings. It promotes self-directed learning and practical application of knowledge.

2. Write four differences between textbook and subject syllabus.

A textbook is a comprehensive book that provides detailed information, explanations, and exercises related to a subject, while a syllabus is a structured outline of topics that must be covered in a particular course.

A textbook contains in-depth content with examples and illustrations that facilitate learning, whereas a syllabus serves as a guideline for what should be taught and does not include detailed content.

A syllabus is usually designed by educational authorities or curriculum developers to ensure uniformity in education, while textbooks can be authored by different individuals or institutions and may vary in content presentation.

Textbooks are used as a reference for acquiring knowledge, completing assignments, and preparing for exams, while a syllabus acts as a planning tool for teachers to organize lessons and track coverage of topics.

3. Why is classroom management and organization important? Give four reasons.

Classroom management and organization create a conducive learning environment by ensuring orderliness and minimizing disruptions. A well-managed classroom allows students to focus on their studies without unnecessary distractions.

It enhances student discipline by setting clear rules, expectations, and consequences, which help maintain respect and cooperation among learners. This leads to a structured and harmonious learning environment.

Effective classroom management improves teacher efficiency by allowing smooth lesson delivery and reducing time wasted on handling misbehavior. Teachers can focus on instruction rather than on managing conflicts.

It promotes student engagement and participation, as organized classrooms provide structured activities that encourage students to interact, collaborate, and contribute to discussions without confusion or disorganization.

#### 4. Outline four qualities of teaching and learning aids.

Teaching and learning aids should be relevant to the subject matter to ensure they effectively support the lesson objectives and enhance student understanding.

They must be simple and clear, allowing students to grasp concepts easily without confusion. Overly complex materials may hinder comprehension rather than facilitate learning.

Teaching aids should be durable and well-maintained to ensure they can be reused multiple times without significant wear and tear, making them cost-effective.

They need to be engaging and interactive to capture students' interest and encourage active participation, which enhances retention and application of knowledge.

#### 5. Briefly describe four factors which determine the choice of teaching methods.

The nature of the subject influences the teaching method, as theoretical subjects may require lectures and discussions, while practical subjects demand demonstrations and hands-on activities.

Student characteristics such as age, learning abilities, and prior knowledge affect the choice of methods. Younger learners may require more interactive and engaging techniques, while older students can handle complex discussions.

Availability of resources plays a role in selecting teaching methods. Some methods, like experiments and demonstrations, require specific materials, while discussions and lectures need minimal resources.

Class size determines the effectiveness of certain teaching strategies. Large classes may require structured approaches like lectures, whereas small classes allow more interactive techniques like group work.

#### 6. State four purposes of keeping records in a farm.

Farm records help in tracking financial transactions, ensuring proper accounting of income and expenses for better financial management and profitability analysis.

They provide data for decision-making, allowing farmers to assess production trends, determine the effectiveness of farming methods, and make informed choices.

Record-keeping is essential for monitoring farm productivity, including yields, livestock growth, and input usage, which helps in improving efficiency and planning future activities.

Proper farm records support access to loans and grants, as financial institutions require documented proof of farm activities and profitability before issuing credit.

7. Point out four functions of the scheme of work.

A scheme of work guides teachers in planning lessons by outlining the sequence and duration of topics, ensuring structured and organized teaching.

It helps in monitoring syllabus coverage, ensuring that all required content is taught within the academic period without omissions.

It facilitates lesson preparation by allowing teachers to allocate appropriate teaching methods, materials, and assessments for each topic.

It serves as a reference for substitute teachers, enabling them to continue lessons seamlessly in case of teacher absence, ensuring continuity in learning.

8. Write four similarities between the features of Agricultural laboratory and that of other science subject laboratories.

Both laboratories have specialized equipment for conducting experiments and practical activities, ensuring hands-on learning and application of scientific concepts.

They maintain strict safety measures, including protective gear, proper waste disposal, and guidelines to prevent accidents during practical sessions.

Agricultural and science laboratories emphasize accuracy in measurement and data recording, as experiments require precision for reliable results.

Both laboratories serve as learning spaces for practical investigations, enabling students to apply theoretical knowledge in real-world scenarios.

9. Briefly explain the functions of each of the reciprocating parts of an engine:

(a) Piston moves up and down within the cylinder, converting the force of expanding gases into mechanical motion that drives the crankshaft.

(b) Valves control the intake of the air-fuel mixture and the expulsion of exhaust gases, ensuring proper timing of combustion and engine efficiency.

(c) Connecting rods link the pistons to the crankshaft, transmitting motion from the piston to rotate the crankshaft and generate power.

(d) Valve seats provide a sealing surface for the valves, ensuring proper compression and preventing leakage of gases during engine operation.

10. Propose four rules that can be used by a teacher for behaviour modification.

Establishing clear expectations helps students understand acceptable behavior and the consequences of misbehavior, ensuring discipline in the classroom.

Positive reinforcement, such as rewards and praise, encourages good behavior and motivates students to follow rules consistently.

Consistent enforcement of rules ensures fairness and reliability, preventing confusion and resistance from students when discipline is applied.

Encouraging self-discipline and responsibility teaches students to regulate their actions and develop good habits without constant supervision.

11. Using five points, explain the strengths of essay-type test items.

Essay-type tests allow students to demonstrate deep understanding by explaining concepts in detail, showcasing their ability to think critically and analyze information.

They enhance creativity and originality, as students can express ideas in their own words and construct arguments based on their perspectives.

Essay questions promote logical thinking and organization, as students must structure their responses coherently and support their points with relevant information.

They test higher-order cognitive skills such as evaluation, synthesis, and application, making them effective for assessing complex learning outcomes.

These tests minimize guessing, as students must construct meaningful responses rather than select answers, providing a more accurate assessment of knowledge.

12. Why is the use of teaching and learning aids in the classroom important?

They enhance student understanding by providing visual and practical examples, making abstract concepts easier to grasp.

Teaching aids increase student engagement by making lessons more interactive and enjoyable, reducing boredom and passive learning.

They cater to different learning styles, accommodating visual, auditory, and kinesthetic learners for improved comprehension.

They improve retention by reinforcing information through multiple sensory experiences, helping students recall and apply knowledge effectively.

13. Fishing industry has not shown significant economic contribution due to illegality in fishing. Suggest five measures to stop illegal fishing.

Strengthening law enforcement ensures strict penalties for illegal fishing activities, discouraging unlawful practices.

Community education raises awareness about the negative impact of illegal fishing and promotes responsible fishing methods.

Providing alternative livelihoods reduces dependence on illegal fishing by offering fishermen sustainable income sources.

Implementing better monitoring and surveillance systems helps track and prevent unauthorized fishing activities.

Encouraging responsible fishing practices through training and incentives promotes sustainable resource management.

14. Describe six functions of agricultural prices.

Agricultural prices regulate supply and demand by influencing farmers' production decisions and consumer purchasing behavior. When prices are high, farmers are motivated to increase production, while consumers may reduce consumption. Conversely, low prices discourage excessive production but make agricultural products more affordable to consumers.

They serve as an income determinant for farmers, as the prices of agricultural products directly affect the earnings of producers. Higher prices lead to increased revenue for farmers, while low prices may result in financial losses, affecting their ability to reinvest in farming activities.

Agricultural prices provide market signals that guide investment decisions in the agricultural sector. When prices of certain crops or livestock products rise, farmers and investors may allocate more resources to those commodities, leading to expansion in production and economic growth.

They influence resource allocation by determining how land, labor, and capital are utilized in agriculture. High prices for a particular crop may encourage farmers to allocate more land and labor to its cultivation, while low prices may shift resources to more profitable ventures.

Agricultural prices contribute to government policy formulation by helping authorities set appropriate subsidies, tariffs, and import/export regulations. Stable prices support food security, while volatile prices may prompt interventions to stabilize the market.

They impact rural development by determining the economic well-being of farming communities. When prices are favorable, farmers experience better living conditions, increased employment opportunities, and improved infrastructure, which contribute to overall rural development.

15. You are required to teach a topic on “Weeds and weed control,” elaborate five cultural methods of weed control commonly applied in Tanzania.

Crop rotation involves growing different crops in a systematic sequence to disrupt the life cycle of weeds. By changing crop types, specific weeds that thrive on one crop are suppressed, reducing their growth and spread without excessive use of herbicides.

Mulching involves covering the soil surface with organic or inorganic materials such as dry grass, leaves, or plastic sheets. This prevents sunlight from reaching weed seeds, inhibiting their germination while also conserving soil moisture and enhancing soil fertility.

Hand weeding and hoeing involve manually removing weeds using hands or simple tools like hoes. This method is effective for small-scale farms and helps eliminate weeds before they mature and produce seeds. However, it requires labor and frequent attention.

Timely planting ensures that crops establish themselves quickly and outcompete weeds for nutrients, water, and sunlight. When crops are planted at the right time, they can grow densely and suppress weed growth naturally.

Proper spacing of crops helps minimize weed infestation by ensuring that plants grow closely together, leaving little room for weeds to develop. This reduces the need for chemical weed control while maintaining high crop yields.

16. Identify five tools which are found in the farm workshop store and explain the function of each one.

A spanner is used to tighten or loosen nuts and bolts in farm machinery and equipment. It ensures proper assembly and maintenance of tools and structures, preventing mechanical failures and prolonging equipment lifespan.

A hammer is a versatile tool used for driving nails, breaking objects, and shaping metal components in the farm workshop. It is essential for repairing wooden structures, fencing, and assembling farm implements.

A hacksaw is used for cutting metal, plastic, or wooden materials in farm workshop repairs. It is essential for modifying equipment, fabricating structures, and maintaining tools that require custom adjustments.

A grease gun is used to apply lubrication to moving parts of farm machinery and equipment, reducing friction and wear. Proper lubrication enhances the efficiency and longevity of machines by preventing breakdowns and rust formation.

A chisel is a cutting tool used for shaping wood and metal surfaces during repair and construction activities on the farm. It is essential for carpentry work, sharpening edges, and fine-tuning farm equipment.