

**THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATION COUNCIL OF TANZANIA
DIPLOMA IN SECONDARY EDUCATION EXAMINATION**

752

HOME ECONOMICS

Time: 3 Hours.

ANSWER

Year: 2005

Instructions

1. This paper has Section A, B and C with a total of **Sixteen (16)** questions.
2. Answer **all** questions from Section A and **two (2)** questions from Section B and C each.
3. Section A carries **forty (40)** marks and Section B and C carries **thirty (30)** marks each.
4. Mobile phones are **not** allowed inside the examination room.
5. Write your **Examination Number** on every page of your answer booklet

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SECTION A (40 Marks)

Answer all questions in this section.

1. Define the term “basal metabolic rate (BMR)” and state two factors that can influence it.

Basal Metabolic Rate (BMR) is the minimum amount of energy (calories) required by the body to maintain essential life functions, such as breathing, blood circulation, and cell production, while at rest in a neutrally temperate environment.

One factor that influences BMR is a person's age, as it generally decreases with increasing age due to a loss of lean muscle mass.

Another factor influencing BMR is a person's body composition, specifically the proportion of lean muscle mass, as muscle tissue burns more calories than fat tissue even at rest.

2. List four benefits of a family adopting a Zero Waste approach to household management.

One benefit is a significant reduction in garbage sent to landfills, which is positive for the environment and local waste management.

Another benefit is saving money by purchasing fewer packaged goods, repairing items instead of replacing them, and utilizing resources more efficiently.

Adopting a Zero Waste approach encourages a more thoughtful and intentional consumption pattern, prompting the family to buy only what they truly need.

It also leads to a healthier home environment by reducing exposure to chemicals found in many packaged foods and disposable products.

3. Mention four reasons why a teacher must conduct a pre-assessment before starting a new Home Economics unit.

A pre-assessment helps the teacher gauge the learners' existing knowledge and prior experience with the topic, preventing the teaching of material they already know.

It allows the teacher to identify specific misconceptions or gaps in understanding that need to be addressed during the unit's instruction.

The results enable the teacher to tailor the instructional content and pace of the lessons to better meet the actual needs and skill levels of the class.

A pre-assessment provides a baseline for measuring learning growth at the end of the unit, helping to evaluate the effectiveness of the teaching methods used.

4. State four methods of creating temporary fullness in a garment.

One method of creating temporary fullness is gathering, which involves drawing two or more rows of parallel stitching threads to scrunch the fabric into soft, small folds.

Another method is pleating, which involves folding the fabric into sharp, even folds that are pressed or stitched down to control the fullness precisely.

Tucks are a third method, consisting of stitched folds of fabric that are decorative and release fullness at a specific point on the garment.

A fourth method is shirring, which uses elastic thread or multiple rows of elasticized stitching to draw up the fabric, creating soft, stretchy, and controlled fullness.

5. Give four characteristics of a properly maintained and functioning sewing machine.

A properly maintained machine operates smoothly and quietly, without grinding sounds or excessive vibration, indicating that internal parts are clean and lubricated.

It produces even and consistent stitches of the correct tension without skipping, looping, or jamming the thread.

The needle threader and bobbin winding mechanism work flawlessly, saving time and indicating that all small moving parts are aligned and functional.

All the feed dogs, presser feet, and tension discs are free of lint and residue, allowing the fabric to move correctly and ensuring the tension settings are accurate.

6. Identify four nutritional benefits of incorporating legumes into the daily diet.

Legumes are an excellent source of plant-based protein, which is essential for muscle repair, growth, and overall body function, making them a great alternative to meat.

They are rich in dietary fiber, which aids in digestion, promotes gut health, and helps in regulating blood sugar and cholesterol levels.

Legumes provide significant amounts of essential minerals, particularly iron for preventing anemia and zinc for immune function.

They are a good source of B vitamins, such as folate, which is crucial for healthy cell division and is particularly important during pregnancy.

7. List four factors that lead to fading or discoloration in colored fabrics during washing.

One factor is using hot water for washing, as high temperatures accelerate the release of dye molecules from the fabric fibers.

Another factor is exposure to harsh chemicals found in certain detergents, particularly chlorine bleach or strong stain removers, which strip the color from the dye.

Over-agitation or excessive friction in the washing machine can mechanically damage the fibers, making the color appear duller or faded over time.

Finally, drying colored items in direct sunlight is a major factor, as the ultraviolet (UV) rays rapidly break down the chemical bonds in the dye molecules.

8. State four reasons why a family should maintain an emergency fund.

An emergency fund provides a financial buffer to cover unexpected job loss or a significant reduction in income, preventing the need to rely on high-interest debt.

It allows the family to pay for unforeseen medical expenses or urgent repairs, such as a burst water pipe or car breakdown, without disrupting their regular budget.

Maintaining this fund helps reduce financial stress and anxiety within the family, knowing they are prepared for the unpredictable challenges of life.

The fund allows the family to avoid selling investments or assets at a loss when a sudden need for cash arises.

9. Mention four ways to conserve fuel/energy while cooking food in the kitchen.

One way is to use pots and pans that match the size of the burner, ensuring that heat is efficiently transferred to the base of the pot rather than escaping around the sides.

Another way is to use lids on pots and pans while cooking, which traps heat and steam, drastically reducing cooking time and energy consumption.

Pre-soaking dry ingredients like beans or grains reduces the amount of time needed for boiling, thereby saving fuel or electricity.

When using an oven, avoid opening the door frequently to check on the food, as each time the door is opened, a significant amount of stored heat is lost, requiring the oven to use more energy to reheat.

10. Give four examples of sensory qualities that are important when judging the success of a cooked dish.

One sensory quality is flavor, which encompasses the combination of tastes (sweet, sour, salty, bitter, umami) and aromas that define the dish's identity.

Texture is another key quality, referring to the way the food feels in the mouth, such as being crisp, tender, creamy, or chewy.

The color and visual appeal of the dish, including the brightness, variety, and arrangement of ingredients on the plate, are important as they create the first impression.

The aroma or smell of the food is a critical sensory quality that influences the perception of flavor and contributes significantly to the overall dining experience.

SECTION B (30 Marks)

Answer any two questions from this section.

11. Describe six factors that must be considered when planning the storage space in a family kitchen to maximize efficiency and safety.

One factor is the frequency of use of items; frequently used items (like everyday cutlery and plates) should be stored in the most accessible locations, while seldom-used items (like seasonal serving dishes) can be stored higher up or further away.

The weight and size of items must be considered; heavy items (like large pots, small appliances, or bulk ingredients) should be stored on lower, sturdy shelves to prevent injury and make them easier to lift.

Proximity to the point of use is a crucial factor; for instance, spices and cooking oils should be stored near the stove, and dishes should be stored near the dishwasher or sink area.

The storage must account for ventilation and temperature control for food items; for example, root vegetables need cool, dark, and dry storage, while grains and flour need airtight containers away from heat.

Safety features are essential; cleaning chemicals and hazardous materials must be stored in child-proof locks, separate from food, and often higher up to prevent accidental exposure or contamination.

Finally, the storage should be flexible and adaptable, using adjustable shelving, pull-out drawers, and specialized inserts to accommodate various shapes and sizes of containers and tools, maximizing the efficient use of vertical and horizontal space.

12. Explain six nutritional consequences of poor maternal health during pregnancy on the developing foetus and newborn.

Poor maternal health can lead to Intrauterine Growth Restriction (IUGR), resulting in a baby with a low birth weight, because the placenta may not receive enough nutrients to support optimal fetal growth.

A deficiency in maternal folate (folic acid) significantly increases the risk of neural tube defects in the foetus, such as spina bifida, which affects the development of the brain and spinal cord.

Poor maternal nutrition, particularly deficiencies in iron and B12, can lead to maternal anemia, which in turn can restrict oxygen supply to the foetus, increasing the risk of preterm birth.

Inadequate maternal intake of iodine can cause cretinism in the newborn, leading to severe and irreversible intellectual disability and growth problems due to poor thyroid hormone development.

Poor maternal health, particularly uncontrolled diabetes or obesity, can result in macrosomia (an overly large baby), which complicates delivery and increases the newborn's risk of later developing obesity and type 2 diabetes.

Furthermore, a lack of Vitamin D and calcium in the mother's diet can negatively impact the foetus's bone development and increase the newborn's susceptibility to conditions like rickets.

13. Discuss six ways a Home Economics curriculum can be adapted to promote entrepreneurship skills among learners.

The curriculum can be adapted by introducing a "product development and marketing" project, where learners research market needs, develop a unique food item or textile product, create a brand, and design packaging and a business plan.

It should incorporate financial literacy lessons focused on small business management, teaching skills like calculating production costs, setting profit margins, managing cash flow, and understanding basic taxation.

Teachers should organize a mini-trade fair or market day where learners can produce, price, and sell their homemade items (e.g., baked goods, custom accessories) to the school community, providing real-world sales experience.

Inviting local entrepreneurs who have started businesses in catering, fashion design, or interior decor allows learners to learn directly from their experiences, understand business challenges, and network for potential mentorship.

The curriculum needs to include practical instruction on quality control and standardization; learners must ensure every item produced meets a consistent quality standard, a fundamental requirement for a successful business.

Finally, lessons can focus on customer service and effective communication, training learners on how to receive feedback, handle complaints professionally, and build strong relationships with clients, all crucial for business longevity.

SECTION C (30 Marks)

Answer any two questions from this section.

14. Explain in detail six steps involved in planning and conducting a field trip to a local food production facility or textile factory for Home Economics learners.

The first step is to define clear learning objectives and secure institutional approval, ensuring the trip directly aligns with the Home Economics curriculum, such as observing industrial food hygiene or manufacturing processes, and obtaining all necessary permissions from the school administration.

Next, the teacher must contact the facility well in advance to arrange the visit, confirming the date, time, group size, and securing a knowledgeable guide, while also explicitly clarifying the safety rules and any specific attire (like closed-toe shoes or hairnets) required for the tour.

The third step involves preparing the learners for the trip by conducting a pre-trip lesson on the processes they will observe, explaining the purpose, reviewing the facility's safety guidelines, and providing a checklist or worksheet to guide their observations during the tour.

During the visit, the teacher must actively supervise the learners and facilitate learning by keeping the group together, encouraging them to ask relevant questions, pointing out key processes or equipment that relate to the curriculum, and ensuring all safety rules are strictly followed.

Upon returning, the essential step is to conduct a post-trip follow-up and evaluation, involving a class discussion or a written assignment where learners reflect on what they observed, analyze the connection between the industry practices and their classroom lessons, and submit their completed observation sheets.

Finally, the teacher should write a formal thank-you letter to the facility manager and the guide, expressing appreciation for their time and contribution to the learners' education, which helps in maintaining good community relations for future educational opportunities.

15. Describe six methods of preparing food that aim to preserve maximum nutrient content and explain the mechanism behind each.

One method is steaming, where food is cooked by hot vapor without immersion in water; the mechanism is that nutrients are not leached out into the cooking liquid, which significantly reduces the loss of water-soluble vitamins like Vitamin C and B vitamins.

Another method is stir-frying in a small amount of oil at high heat for a short duration; the mechanism is the rapid cooking time minimizes the exposure to heat, which reduces the thermal breakdown and oxidation of heat-sensitive vitamins.

Microwaving is a fast cooking method that can be done with minimal water; the mechanism is that the short cooking time and lack of excess water greatly reduce the leaching and degradation of vitamins and minerals compared to boiling.

Blanching, where food is briefly plunged into boiling water and then immediately into ice water, preserves nutrients and color; the rapid heat-and-cool cycle deactivates enzymes that cause nutrient loss and discoloration, but it is not a final cooking method.

Using the cooking liquid in a dish, for example, making soup or gravy with the water used to boil vegetables, is a conservation method; the mechanism is that the leached, water-soluble nutrients are retained and consumed as part of the meal, rather than being discarded.

Finally, eating raw food, particularly fruits and certain vegetables, whenever safe and appropriate, preserves the maximum nutrient content; the mechanism here is simply the complete elimination of heat and water exposure, thus preventing all forms of cooking-related nutrient loss.

16. Explain six principles of money management that are crucial for young adults starting their first independent household.

One crucial principle is creating and strictly adhering to a monthly budget, which tracks all income and sets spending limits for categories like rent, utilities, and groceries. This ensures all essential expenses are covered and prevents overspending.

Another principle is prioritizing saving, particularly for an emergency fund, by automatically setting aside a fixed portion of income *before* discretionary spending. This provides a financial buffer for unexpected events and reduces reliance on debt.

Young adults must practice avoiding unnecessary debt, especially high-interest consumer debt like credit card balances. If debt is necessary, the principle is to pay more than the minimum payment to reduce the total interest paid and accelerate debt freedom.

It is crucial to understand and track all monthly fixed expenses (rent, loan payments, subscriptions) and variable expenses (food, transport). A full awareness of where money is going is the foundation for effective financial control.

The principle of making informed purchasing decisions by researching prices, comparing features, and avoiding impulse buying is vital. This maximizes the value received from every dollar spent on goods and services.

Finally, young adults should learn to regularly check their bank statements and bills for errors or fraudulent charges. This principle of vigilance ensures that their financial records are accurate and protects them from potential financial loss.