

**TERM TWO EXAMINATIONS
HOME SCIENCE
FORM FOUR- PAPER 1
MARKING SCHEME**

SECTION A (40 Marks)

1. Reasons for using tomatoes when cooking food.

- ✓ To improve the flavour of food.
- ✓ Used to garnish food.
- ✓ To improve the nutritive value of food.
- ✓ Improve the colour of the food.
- ✓ Used to soften meat.
- ✓ Used in making salads.

(Any two correct point, ½ mark each. ½ x 2 = 1mark)

2. Categories of people prone to scurvy.

- ✓ People living in very dry areas where there are no fresh food supplies.
- ✓ Poor elderly people who live alone.
- ✓ Smokers
- ✓ People at war who cannot get fresh supplies of food.
- ✓ Prisoners who are serving a long sentence.
- ✓ Mentally challenged people with little access to fruits and vegetables.
- ✓ People with a history of alcoholism.

(Any four correct points, ½ mark each. ½ x 4 = 2marks)

3. Pattern marking that need to be transferred to fabric.

Stitching Line



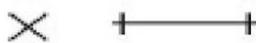
Pleats



Balance points



Darts



Button & Buttonhole

(Correct symbol ½ mark each, correct labelling ½ mark each. 1 x 3 = 3marks)

4. Precautions to take when preserving grains

- ✓ Ensure the grains are completely dry.
- ✓ Store them away from chemicals that could contaminate the grains.
- ✓ Store them raised from the ground to avoid dampness.

- ✓ Ensure the grains have no insect pests like weevils.
- ✓ Ensure rodents cannot get into the store.
- ✓ Store in tightly closed containers.
- ✓ Ensure that there is good ventilation to avoid moisture build up.

(Any three correct points, 1 mark each. $1 \times 3 = 3$ marks)

5. Ways of helping children form good habits.

- ✓ Be a role model/model the behaviour to be learned.
- ✓ Set a routine.
- ✓ Reward good behaviour.
- ✓ Encourage consistency.
- ✓ Practice patience. Habits are not learned overnight.
- ✓ Give reminders on what needs to be learned.

(Any four correct answers, $\frac{1}{2}$ mark each. $\frac{1}{2} \times 4 = 2$ marks)

6. Accessories used in the living room.

- ✓ Clocks.
- ✓ Calendars.
- ✓ Wall pictures.
- ✓ Family portraits.
- ✓ Trophies.
- ✓ Lamps
- ✓ Candles
- ✓ Mirrors

(Any four correct accessories, $\frac{1}{2}$ mark each. $\frac{1}{2} \times 4 = 2$ marks)

7. Functions of lipids in the body.

- ✓ They are a reserve store of energy.
- ✓ Insulate the body against cold.
- ✓ Cushion vital organs against damage/injury.
- ✓ Transport fat soluble vitamins.
- ✓ Increase satiety in a meal.
- ✓ Part of the structural component of cells.

(Any two correct points, 1 mark each. $1 \times 2 = 2$ marks)

8. Qualities of a well-made patch pocket.

- ✓ Firmly stitched all round.
- ✓ Well reinforced at the mouth.
- ✓ Stitching is done very close to the folded edge.
- ✓ Even stitching all round.
- ✓ Well stitched to maintain shape.
- ✓ Hem well-made and neatened.
- ✓ Turnings well-trimmed to avoid bulk.

(Any three correct points, 1 mark each. $1 \times 3 = 3$ marks)

9. Ways of reducing worm infestation in children.

- ✓ Encourage hand hygiene.
- ✓ Ensure they walk around in shoes.
- ✓ Discourage them from eating soil/dirt.
- ✓ Ensure all drinking water is treated/safe for drinking.
- ✓ Keep the toilets clean.
- ✓ Deworm children regularly.

(Any two correct points, 1 mark each. $1 \times 2 = 2$ marks)

10. Ways a student can obtain a pattern for making a garment.

- ✓ Drafting using one's body measurements.
- ✓ Using commercial paper patterns.
- ✓ Fashion draping.
- ✓ Tracing from an old garment.

(Any two correct methods, 1 mark each. $1 \times 2 = 2$ marks)

11. Rules to observe when using left over food.

- ✓ Keep the food covered to avoid contamination.
- ✓ Re-heat other than recook the food to avoid loss of nutrients.
- ✓ If frozen ensure the food is properly thawed before use.
- ✓ Change the form in which the food is prepared.
- ✓ Flavour the food well to avoid a bland taste.
- ✓ Do not reheat food more than once.
- ✓ Include a sauce or gravy since reheated food tends to be dry.
- ✓ De-bone meat to allow to heat through.
- ✓ Divide into small portions to ensure it heats thoroughly.

(Any three correct points, 1 mark each. $1 \times 3 = 3$ marks)

12. Ways wool differs from cotton when exposed to fire.

- ✓ Wool does not ignite easily while cotton ignites very fast.
- ✓ Wool is self-extinguishing when pulled off the flame while cotton continues to burn even off the flame.
- ✓ Wool emits the smell of burning hair/feathers while cotton emits the smell of burning paper.
- ✓ Wool produces a dark smoke when burning while cotton produces white smoke.
- ✓ Wool leaves behind a black crushable bead while cotton leaves behind a soft grey ash when burnt.

(Any three correct points, 1 mark each. $1 \times 3 = 3$ marks)

13. Qualities of good sewing thread.

- ✓ Strong to avoid breakage.
- ✓ Correct for the fabric being stitched/matches fabric weight and fibre content.
- ✓ Matches the stitches being made- embroidery thread for embroidery stitches, tacking tread for temporary stitches.
- ✓ Matches the colour of the fabric unless decorative.
- ✓ Should not knot easily.

(Any two correct points, 1 mark each. $1 \times 2 = 2$ marks)

14. Disadvantages of using laminated wood to make worktops in the kitchen.

- ✓ Easily damaged by water.
- ✓ Easily scratched by sharp objects.
- ✓ Not resistant to heat.
- ✓ Some laminating materials are not food safe i.e. could contain poisonous chemicals
- ✓ Prone to chipping
- ✓ Less durable than stone.

(Any two correct points, 1 mark each. $1 \times 2 = 2$ marks)

15. Ways of avoiding snakes in the home.

- ✓ Seal entry points such as holes.
- ✓ Eliminate hiding spots by clearing clutter.
- ✓ Clear bushes and trim grass around the house.
- ✓ Avoid garbage heaps to keep away rodents.

(Any two correct points, 1 mark each. $1 \times 2 = 2$ marks)

16. Name **two** functional accessories that can be used to enhance appearance.

(1mk)

- ✓ Belts.
- ✓ Brooches.
- ✓ Watches.
- ✓ Scarves.
- ✓ Gloves
- ✓ Rings e.g. wedding bands.
- ✓ Hats.
- ✓ Sunglasses.
- ✓ Bags- handbag, clutch bag, briefcase.

(Any two correct accessories, $\frac{1}{2}$ mark each. $\frac{1}{2} \times 2 = 1$ mark)

17. Reasons why building a family home is better than buying.

- ✓ In building one can customize the design while a house that is bought is designed by someone else.
- ✓ One can choose the building materials when building whereas this is not possible when one buys a house.
- ✓ Gives opportunity to choose location of the house based on family needs unlike one that is bought where one has to choose from what is available.
- ✓ Cheaper to build a house than to buy a similar house in an equivalent location.
- ✓ One is sure of the quality of the house unlike in a house that is bought where one does not know its structural quality. (Any two correct points, 1 mark each. $1 \times 2 = 2$ marks)

18. Meaning of the terms in reference to medication:

a) Dosage

- ✓ Amount or number of medications to be taken at a particular time for example 5mls, 2 tablets etc.

b) Frequency

- ✓ Number of times to take medication in a day or the duration between one dose and another for example once a day, three times a day etc.

(Correct definition for each 1 mark. $1 \times 2 = 2$ marks)

19. Give **two** qualities you would look for when choosing fabrics for making school uniform. (2mks)

- ✓ Strong to last long.
- ✓ Withstand frequent washing.
- ✓ Colour fast to maintain colour of the uniform.
- ✓ Resistant to abrasion.
- ✓ Breathable to keep the students fresh.
- ✓ Easy to maintain.
- ✓ Not affected by washing detergents.
- ✓ Absorbent to take in sweat.
- ✓ Medium in weight. Avoid heavy or very light fabrics.

(Any two correct points, 1 mark each. $1 \times 2 = 2$ marks)

SECTION B (20 Marks)

20.

a) Cleaning a stained melamine jug.

- ✓ Soak($\frac{1}{2}$) the jug overnight ($\frac{1}{2}$) in water containing a bleaching($\frac{1}{2}$) agent.
- ✓ Remove from soaking water and clean in hot ($\frac{1}{2}$) water and a detergent ($\frac{1}{2}$) using a sponge($\frac{1}{2}$).
- ✓ Rinse thoroughly/severally ($\frac{1}{2}$) in hot($\frac{1}{2}$) water to remove all detergent.
- ✓ Leave to drain ($\frac{1}{2}$) on a clean rack.
- ✓ Once dry, wipe off any water particles using a clean dish cloth ($\frac{1}{2}$) and store in a clean place($\frac{1}{2}$).
- ✓ Clean up the working area($\frac{1}{2}$).

(Correct points well flowing. $12 \times \frac{1}{2} = 6$ marks)

b) Laundering a woolen shawl.

- ✓ Collect all equipment and materials needed ($\frac{1}{2}$).
- ✓ Take measurements ($\frac{1}{2}$) and record ($\frac{1}{2}$).
- ✓ Shake to remove loose dirt ($\frac{1}{2}$).
- ✓ Wash quickly using kneading and squeezing ($\frac{1}{2}$) method in lukewarm water ($\frac{1}{2}$) containing a mild ($\frac{1}{2}$)detergent ($\frac{1}{2}$)and keeping the article under water.
- ✓ Squeeze out water and rinse severally in lukewarm ($\frac{1}{2}$)
- ✓ Give a final lukewarm ($\frac{1}{2}$) rinse.
- ✓ Squeeze out as much water as possible ($\frac{1}{2}$) roll in a clean towel ($\frac{1}{2}$)
- ✓ Spread on a clean surface in the shade ($\frac{1}{2}$). Take measurements, ($\frac{1}{2}$) compare with the original and reshape.
- ✓ When completely dry ($\frac{1}{2}$), press over a pressing cloth/indirectly ($\frac{1}{2}$) on the wrong side ($\frac{1}{2}$) using a warm iron ($\frac{1}{2}$).
- ✓ Air ($\frac{1}{2}$) to dry completely.
- ✓ Store in a clean place that has some mothballs ($\frac{1}{2}$).
- ✓ Clear up the working area ($\frac{1}{2}$).

(Correct sequence, $\frac{1}{2} \times 18 = 9$ marks)

c) Cleaning a wooden spoon used to make ugali.

- ✓ Scrape($\frac{1}{2}$) off left over ugali using the back of a knife($\frac{1}{2}$).
- ✓ Clean in warm($\frac{1}{2}$) water with soap($\frac{1}{2}$) and scrub($\frac{1}{2}$) along the grain($\frac{1}{2}$) using a kitchen brush/sisal pad.
- ✓ Rinse using warm($\frac{1}{2}$) water.
- ✓ Give a final cold($\frac{1}{2}$) rinse.
- ✓ Pat with a clean($\frac{1}{2}$) dish cloth($\frac{1}{2}$) and leave in a clean airy($\frac{1}{2}$) place to dry completely.
- ✓ Store in a clean dry place($\frac{1}{2}$).

(Correct sequence, $\frac{1}{2} \times 10 = 5$ marks)

SECTION C (40 Marks)

21. a) Advantages of buying vegetables and fruits in an open-air market over a supermarket.

- ✓ The supplies are fresh compared to the ones in a supermarket.
- ✓ Open air markets are cheaper than supermarkets.
- ✓ One can bargain unlike in a supermarket where prices are fixed.
- ✓ Most of the fruits and vegetables are what is in season and not those imported and stored for a long time.
- ✓ The open-air markets are nearer one's area of residence reducing the trouble of transporting the items home.
- ✓ Builds/benefits local communities unlike the supermarket where fruits and vegetables may be sourced from very far.
- ✓ If foods come directly from the farms, one may be able to make personal contacts with the farmers unlike in a supermarket where the supplier is not known to the consumer.
- ✓ There are more choices of items being bought since they are sold by many vendors unlike in a supermarket where the choices are just what you get in the particular shop.

(Any six correct points, 1 mark each. $1 \times 6 = 6$ marks)

b) Problems arising from poor nutrition in children.

- ✓ Low immunity. Poor nutrition compromises the child's ability to fight infections and disease. This leads to frequent infections and hospitalisation.
- ✓ Stunting and wasting. Children who are undernourished are smaller in stature than their counterparts who are well nourished. These children may never grow to their full height or cognitive potential.
- ✓ Low education attainment. Children who are poorly nourished may be unable to concentrate in class, miss class due to frequent illness and hospitalisation leading to poor performance in school. Malnutrition when severe may impair brain development and thus again lead to poor academic achievement.
- ✓ High mortality rate. Due to lowered immunity and susceptibility to other illnesses, children who are poorly nourished are at risk of dying before their 5th birthday or early in life.
- ✓ Low productivity. Adults who were malnourished as children are less productive than their counterparts who received good nutrition in their early years.
- ✓ Economic burden. Frequent illness and hospitalisation mean that the country spends money on medication and lost working time for mothers taking care of the children.
- ✓ Chronic illness. Children who are overnourished and overweight may develop chronic conditions such as type 1 diabetes and cardiovascular diseases.

(Any three correct statements 1 mark each, explanation 1 mark each. $2 \times 3 = 6$ marks)

b) Precautions to take when laundering a newborn baby's clothes.

- ✓ They should be laundered separately from other family wash.
- ✓ Separate equipment should be used when washing to ensure proper hygiene.
- ✓ Mild detergent should be used to avoid irritating the baby's delicate skin.
- ✓ Avoid the use of bleach as this can cause a skin rash on the baby.
- ✓ Rinse thoroughly to remove all detergent from the clothes to avoid skin irritation.
- ✓ Ensure the clothes are dried thoroughly before storage to avoid dressing the baby in damp clothes.

(Any three correct points, 1 mark each. $1 \times 3 = 3$ marks)

c) Ways COVID-19 may have contributed to malnutrition.

- ✓ Loss of income. Many people lost their livelihood during the pandemic. Loss of income meant that households could not afford food or had to settle for less nutritious foods.
- ✓ Disruptions in supply. Due to limitations in movement, some foods could not be transported from areas where they were available meaning some regions suffered lack of food supplies.
- ✓ Increased food prices. This was as a result of reduced supply. Higher food prices meant that fewer people could afford what was available in the market.
- ✓ Strained health care systems. The pandemic led to a great strain on health care systems, people were also scared of going to hospital for fear of infection with the virus. This meant that more people ended up being sick at home which could compromise food intake.
- ✓ Disruption on Maternal Child Health care. Pregnant women and mothers with babies shunned clinic visits. This meant that mothers and babies with nutritional problems did not get proper care.
- ✓ Reduced focus on the vulnerable. Governments channeled a lot of resources toward fighting the pandemic. This meant that less focus was put on nutritional programmes and care of the vulnerable population such as those with Tuberculosis or HIV AIDs.
- ✓ COVID-19 triggered malnutrition. In persons suffering from severe illness due to COVID-19, there was the possibility of complications leading to altered functions in the body that could lead to malnutrition, especially in older people.

(Any five correct points, 1 mark each. $1 \times 5 = 5$ marks)

22. a) Qualities of a well-designed kitchen.

- ✓ The kitchen is well-lit with good natural lighting during the day. There is also sufficient lighting during the night for good visibility.
- ✓ Well-ventilated. A lot of heat-generating activities are conducted in the kitchen. Also, there are a lot of aromas in the kitchen that could permeate the rest of the house. Good ventilation is important to keep the kitchen comfortable to work in.
- ✓ The floor is of appropriate material. A kitchen floor should be non-slippery, resilient, and resistant to water.
- ✓ Work surfaces are well placed. The work surfaces should be of a convenient height to avoid strain when working.
- ✓ Positioning of work triangle. Work centres should be arranged in a way that there is little movement between the three main work areas in a kitchen-the sink, the cooker, and the food storage area.
- ✓ Ample working space. The kitchen should be spacious to avoid crowding. There should be enough space for working and movement within the kitchen.

- ✓ Well located. The kitchen should be located near the dining/living room for easy passage of food and should be away from the toilet for hygiene reasons.
- ✓ Easy access. There should be a door that directly leads to the kitchen to allow for easy delivery of kitchen requirements/farm deliveries.

(Any five correct points, 1 mark each. $1 \times 5 = 5$ marks)

b) Limitations of using charcoal as a fuel.

- ✓ It is bulky. This means it requires adequate storage space which may not always be available especially in a small house.
- ✓ It takes time to light. This increases the time taken to cook or heat a place since the fuel does not light fast.
- ✓ Cumbersome in use. Charcoal leaves a black dust on surfaces and hands. One needs to frequently clean hands and places where it is used to avoid marks and dirt.
- ✓ Difficult to use during the wet season. Charcoal easily gets wet or damp. This makes it difficult to use especially during rainy seasons.
- ✓ Risks of deforestation. Charcoal production requires that trees are cut down. Increased use of charcoal could lead to deforestation.
- ✓ Emits impurities in the air. This leads to pollution of the air.
- ✓ Global warming. Smoke and gases produced during charcoal combustion increase the risk of environmental destruction.
- ✓ Respiratory challenges. Frequent exposure to smoke from charcoal can lead to chest infections and other serious respiratory illnesses.

(Any three correct statements, 1 mark, explanation, 1 mark. $2 \times 3 = 6$ marks.)

c) Advantages of eating home-made food over restaurant food.

- ✓ It is much cheaper than an equivalent of restaurant food.
- ✓ Homemade food is healthier than restaurant food. The latter tend to have more fat, salt, and additives that may not be so healthy to eat.
- ✓ Homemade food leads to less allergic reactions. Some of the additives in restaurant food may lead to allergic reactions or flare up in people who have allergic conditions.
- ✓ Homemade food is fresh. Restaurant food may not always be fresh and this may lead to infections and food poisoning.
- ✓ It is hygienic. In most cases, there are better hygiene controls at home than in a restaurant thus less chance of food contamination.
- ✓ Caters for personal needs. When meals are made at home, individual requirements are taken care of so that everyone is happy with the meal.
- ✓ Quality control. When meals are homemade, there is total control over what goes into the food. This means that quality ingredients are used and harmful additives are avoided.

(Any five correct points, 1 mark each. $1 \times 5 = 5$ marks)

d) Causes of food shortage at the household level.

- ✓ Poverty. This means that households are unable to purchase foodstuffs or afford necessary food items.
- ✓ Burden of illness. If a household has a member who is ill, money is channeled towards treatment and this may reduce the money available for food.
- ✓ Death of the adult caregiver. This changes the dependency pattern so that children take care of children or elderly infirm adults take care of children.
- ✓ Poor governance. Corruption, over taxation and increased cost of living could reduce a household's purchasing power.

- ✓ Natural calamities like drought and floods. These could reduce or completely destroy crops that a family may have planted.

(Any two correct statements, 1 mark, explanation 1 mark each. $2 \times 2 = 4$ marks)

23. a) Factors that may interfere with a family budget.

- ✓ Loss of income through death of bread winner or job loss, may lead to a family living on credit.
 - ✓ Increase in income makes more money available.
 - ✓ Change in personal and or family goals.
 - ✓ Lack of commitment to follow the budget.
 - ✓ Inflation leading to reduction in the purchasing power of a family.
 - ✓ Unplanned change in family size such as multiple babies when only one was expected.
 - ✓ Chronic illness or a serious accident calling for increased use of money for treatment.
- (Any six correct points, 1 mark each. $1 \times 6 = 6$ marks)

b) Ways of ensuring that a bedridden patient does not develop bed sores.

- ✓ Turn the patient frequently to shift weight.
 - ✓ Use cushions to protect pressure points on the body.
 - ✓ Massage pressure points to ensure circulation of blood i.e. hip and back.
 - ✓ Ensure the bed is dry.
 - ✓ If possible, get a mattress that helps relieve pressure.
 - ✓ Do not over rub the skin when bathing since the skin is thin and can easily be injured.
 - ✓ Apply a good lotion or cream to keep the skin moist and avoid abrasion from beddings.
- (Any four correct points, 1 mark each. $1 \times 4 = 4$ marks)

c) Reasons why aluminium is common in making cooking utensils.

- ✓ It has a high melting point thus can withstand high cooking temperatures.
 - ✓ It has good thermal conductivity.
 - ✓ It is relatively light in weight compared to other metals like cast iron or stainless steel.
 - ✓ It is easy to maintain. Aluminium can be scrubbed to keep it clean without destroying the surface.
 - ✓ It does not easily react with food and does not stain easily.
 - ✓ Aluminium cookware is relatively cheaper than those made from other materials.
 - ✓ It is non-toxic. It does not form poisonous chemicals with food.
 - ✓ It is relatively long lasting when well cared for.
- (Any five correct points, 1 mark each. $1 \times 5 = 5$ marks)

d) Factors to observe when buying a sewing machine to be used by students.

- ✓ User friendly; the machine should be easy to operate, not too complicated.
 - ✓ Ensure all the attachments are provided.
 - ✓ Buy from a reliable supplier who can be able to service or provide spare parts.
 - ✓ Instructional manual; It should have a manual to guide learners on use and care.
 - ✓ Type/make of the sewing machine; It should be a strong machine to avoid frequent break down.
 - ✓ Maintenance and service; It should be easy to service locally.
 - ✓ Money available: It should be affordable with the money at hand.
 - ✓ Condition; check that it is in working condition and that all attachments are provided.
- (Any five correct points, 1 mark each. $1 \times 5 = 5$ marks)