



## 14.0 HOME SCIENCE (441)

The year 2007 KCSE Home Science examination tested mastery of knowledge and skills specified in the syllabus. This was the second year Home Science was tested under the revised syllabus. This was examined in three papers. The individual papers were as follows:

**Paper 1 (441/1):** This is a theory paper divided into three sections and it was worth 100 marks unlike the previous year when it was worth 120 marks. This paper consisted of three sections, which are:

- **Section A:** consisted of compulsory short answer questions worth 40 marks.
- **Section B:** questions were compulsory and covered applied practices in Home Science. This was worth 20 marks.
- **Section C:** consisted of three (3) essay questions each worth 20 marks of which candidates were expected to choose and answer any two (2) questions.

**Paper 2 (441/2):** This was a practical paper which tested skills in Clothing Construction and it was worth 45 marks.

**Paper 3 (441/3):** This was also a practical paper testing skills in Foods and Nutrition and it was worth 25 marks.

For purposes of computing the results, the scores of paper 2 (441/2) and 3 (441/3) are added to form **paper 2**.

This report attempts to give an overview analysis of the performance of candidates by highlighting areas where candidates performed poorly. It highlights the possible causes of their poor performance and gives the expected responses.

### 14.1 GENERAL CANDIDATES' PERFORMANCE

The table below shows the candidature and the overall performance in the KCSE Home Science examination in the last two years.

**Table 17: Candidates Overall Performance in Home Science in the year 2007**

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2006	1		120	62.47	14.06
	2		80	35.18	8.25
	<b>Overall</b>	<b>10,571</b>	<b>200</b>	<b>97.65</b>	<b>20.00</b>
2007	1		100	51.69	12.15
	2		70	32.26	7.48
	<b>Overall</b>	<b>11,384</b>	<b>170</b>	<b>83.94</b>	<b>18.00</b>

The following observations can be made from the table above:

- 14.1.1 The candidature increased from **10,571** candidates in the year 2006 to **11,384** candidates in the year 2007, an increase of **813** candidates.
- 14.1.2 The overall performance in the subject improved slightly by 0.50 % from **48.83%** in the year 2006 to **49.38%** in the year 2007.

In this part of the report, an analysis of performance and a discussion of questions which candidates performed poorly will be made.

## **14.2 PAPER 1 (441/1)**

### **14.2.1 Section A**

#### **Question 2**

Mention **two** methods of preserving fruits without using a refrigerator.

The question expected candidates to have mastered the topic of preservation of food.

#### **Weaknesses**

Many candidates did not understand the word "*preserving*".

#### **Expected Responses**

- Drying.
- Jam making.
- Canning.
- Pickling.
- Bottling.

#### **Advice to Teachers**

Teachers are advised to teach the topic on preservation of foods thoroughly.

#### **Question 4**

Identify **two** precautions to take when cleaning glass utensils.

Candidates were required to state the precautions to take when cleaning glass utensils.

#### **Weaknesses**

The candidates specifically answered the question on water glasses. They did not give the precautions but instead outlined the method of cleaning water glasses.

#### **Expected Responses**

- Do not knock against each other.
- Avoid extreme temperatures.
- Use only non-fluffy cloth for drying.
- Do not use harsh abrasives/sharp objects.
- Avoid heaping together/stacking.
- Do not mix with other dishes in the sink.
- Handle with care.

### **Advice to Teachers**

Teachers are advised to clearly differentiate types of glassware in the market and to teach the precautions and care of utensils well.

### **Question 6**

**Suggest two reasons why chicken curry with fried potatoes is not a suitable meal for a person convalescing from typhoid.**

Candidates were required to give reasons on the unsuitability of chicken curry and fried potatoes as a meal for a person convalescing from typhoid.

### **Weaknesses**

Students did not identify the nutritive value of the food.

### **Expected Responses**

- Too oily.
- Too spicy.
- Meal lacks vitamins which are crucial for a convalescent.
- Fried potato is crispy and not easy to digest.

### **Question 7**

**A cake was cooked on the outside but uncooked in the inside.  
Suggest possible causes.**

Candidates were expected to identify the causes of the fault of the cake that had been described in the question.

### **Weaknesses**

Candidates scored poorly in this question, which is an indicator of lack of practical work during the teaching – learning process.

### **Expected Responses**

- Too high temperatures used.
- Baking tin of too light weight material.
- Consistency too soft.
- Inadequate raising agent.

### **Advice to Teachers**

Teachers are advised to carry out practicals and discuss different faults in cake making.

### Question 8

Your five year old cousin has the following signs:

- (i) oedema
- (ii) protruding stomach
- (iii) scattered thin hair.

The nutritional disorder exhibited is .....

The question expected the candidates to identify the nutritional disorder exhibited by oedema, a protruding stomach and scattered thin hair.

#### Weaknesses

Candidates confused the symptoms of "*kwashiorkor*" with those of "*marasmus*".

#### Expected Responses

Kwashiorkor.

#### Advice to Teachers

Teachers are advised to stress on symptoms and signs of different nutritional disorders.

### Question 15

State two disadvantages of maisonnettes.

Candidates were required to state the disadvantages of maisonnettes.

#### Weaknesses

Some candidates had not mastered the different house designs.

#### Expected Responses

- The stairs pose a danger to young children and the elderly.
- They are expensive to build.
- They do not provide enough privacy for the owners.
- Household pests can crawl easily from one house to the next.
- There is danger of fire spreading from neighbouring houses.
- Noise from the neighbouring houses can be disturbing.

#### Advice to Teachers

Teachers are advised to try and practically show candidates the different house designs.

**Question 17**

List four fabrics which cannot be disinfected by boiling.

The question expected candidates to have mastered the behaviour of fibres and fabrics in use and care.

**Weaknesses**

Some candidates tended to guess the fabrics.

**Expected Responses**

- Acetate rayon.
- Viscose rayon.
- Acrylics/Acrilonitrite/Acrilon/Orlon/Courtelle.
- Polyesters/Terylene/Decron/Trevira/Crimplene.
- Polyamide/Nylon.
- Wool.
- Silk.

**Advice to Teachers**

Teachers are advised to teach the topic on the textile fibres thoroughly.

**Question 23**

The size of a French seam is determined by:

- (a) .....
- (b) .....

The question expected the candidates to state the factors that determine the size of a French seam.

**Weaknesses**

The candidates' responses indicated that they did not know that a French seam has different sizes.

**Expected Responses**

- Weight of fabric.
- Type of garment.
- Position where it is to be used.
- Degree of fraying.
- Type of fabric (weight/degree of fraying/type of construction).

**Advice to Teachers**

Teachers are advised to teach the topic on seams exhaustively.

### 14.2.2 Section B

#### Question 25

You are planning to go for a picnic.

- (a) Giving reasons, outline the procedure you would use to thoroughly clean a synthetic bag without a base board.
- (b) Outline the steps to follow when laundering the woollen sweater you will wear.

This question was on applied practices in Home Management. Candidates were expected to read and understand the procedure of cleaning a bag and of laundering a sweater.

#### Weaknesses

Candidates' responses indicated absence of practicals in Home Management, which seemed to have been replaced with cramming. The procedures were mixed up and in part (a) of the question; some candidates applied the rules of taking care of synthetic fabrics.

#### Expected Responses

- a)
  - Shake the bag to remove loose dirt.
  - Scrub to remove fixed dirt with soft brush/sisal fibres to avoid spoiling the bag in warm, soapy water to remove dirt.
  - Clean inside and outside to ensure both sides are clean.
  - Rinse in warm water to remove soap and dirt.
  - Rinse finally in cold water to freshen it.
  - Dry upside down to remove excess water.
  - Dry under a shade to avoid fading.
  
- b)
  - Take measurements and record/draw the outline.
  - Wash in warm soapy water using kneading and squeezing method without lifting from the basin.
  - Rinse in warm water.
  - Final rinse in cold water.
  - Squeeze out the excess water.
  - Roll the sweater in a clean towel.
  - Take measurements and re-shape.
  - Dry flat under a shade on a clean surface.
  - Press using a warm iron avoiding the ribbing.
  - Air.
  - Fold appropriately.

### 14.2.3 Section C

#### Question 28(d)

Explain five desirable qualities of an ironing board.

Candidates were expected to have mastered knowledge on ironing surfaces.

## Weaknesses

Candidates dwelt on other ironing surfaces and not the ironing board as required by the question.

## Advice to Teachers

Teachers are advised to practically show the students the ironing board. Students should also be taught the difference between construction and finishing of garments.

### 14.3 PAPER 2 (441/2)

A pattern of a child's dress is provided. You are advised to study the sketches, the question paper and the layout carefully before you begin the test.

#### MATERIAL PROVIDED

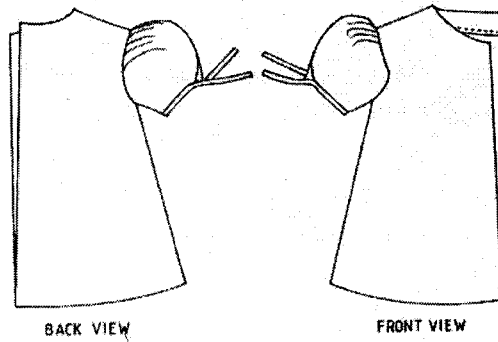
1. Pattern pieces
  - A. Dress front
  - B. Dress back
  - C. Sleeve
  - D. Sleeve binding and ties
  - E. Sleeve opening facing
  - F. Front neck facing
  - G. Back neck facing.
2. Plain light weight cotton fabric 70 cm long by 90 cm wide.
3. Sewing thread to match fabric.
4. One large envelope.

#### THE TEST

Using the materials provided, cut out and make up the RIGHT HALF of the child's dress to show the following:

- (a) The making of a French seam at the shoulder.
- (b) The joining of the side with a neatened open seam.
- (c) The preparation of a faced sleeve opening.
- (d) The joining of the underarm seam using a neatened open seam.
- (e) The binding of the lower edge of the sleeve and preparation of the tie ends.
- (f) The preparation and attachment of the sleeve.  
N.B: Do not trim or neaten the armhole seam allowance.
- (g) The preparation and attachment of neck facings.

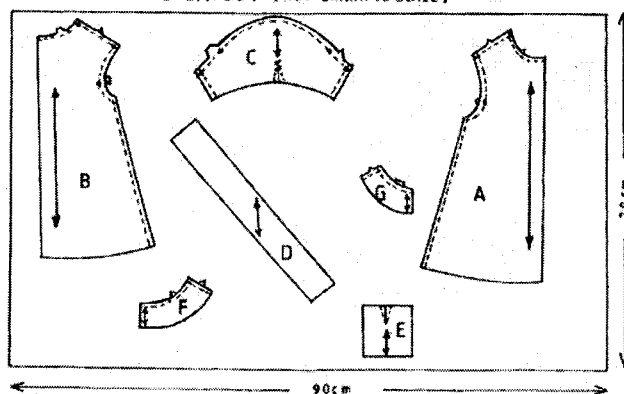
At the end of the examination, firmly sew on to your work, on a single fabric a label bearing your name and index number. Remove the needles and pins from your work, then fold your work carefully and place it in the envelope provided. **Do not** put scraps of fabric in the envelope.



BACK VIEW

FRONT VIEW

THE LAYOUT (NOT DRAWN TO SCALE)



This is a practical paper where candidates were provided with a pattern to cut out and make a child's dress.

The performance of candidates in the paper reflected the following weaknesses:

- Many candidates presented their work with too many unnecessary stitches, loose threads and labels poorly stitched. Teachers should keep reminding students to ensure they remove all temporary stitches after permanent stitching has been done. They should also ensure that the students know how to sew labels on single fabric.
- Candidates displayed a lack of knowledge on the working of a french and an open seam. Most of them did not understand the procedure and as a result trimming was poorly done. Open seams were poorly neatened and there was no knife edge on the French seam. Teachers should teach students the needlework processes practically.
- There was poor management of the faced slit opening. From the performance of candidates it was clear that most candidates did not know what this opening was. Teachers should teach the topic on openings thoroughly and practically.
- Majority of the candidates handed in incomplete work which is evidence of low speed which is a clear manifestation of lack of practicals.



The poor performance in this practical paper is an indication that candidates may not have had sufficient practicals. Teachers should lay more emphasis on the practicals as they boost candidates' performance.

#### Advice to Teachers

Teachers should ensure proper syllabus coverage before students sit for the examination. Practical and theory should be handled hand-in-hand for complimentary purposes especially in Clothing Construction.

### 14.4 PAPER 3 (441/3)

#### THE TEST

You are hosting three officials of your Home Science Club. Using the ingredients listed below, prepare, cook and present a beverage and two tea items for yourselves.

#### Ingredients

Margarine  
Tea leaves  
Bread  
Plain wheat flour  
Eggs  
Sugar  
Oil  
Salt  
Tomatoes  
Milk

**PLANNING SESSION: 30 minutes.**

Use separate sheets of paper for each task listed below and use carbon paper to make duplicate copies then proceed as follows:

1. *Identify the beverage and the tea items, then write down their recipes.*
2. *Write down your order of work.*
3. *Make a list of the foodstuffs and equipment you will require.*

The performance in this paper was very good. However, the following weaknesses were noted.

- Some candidates were still not able to identify the appropriate dishes.
- Many candidates also ordered for too much foodstuff for three people.
- There was poor sequencing of activities.
- Some candidates also ordered for foods outside the ingredients list.

#### Advice to Teachers

Teachers are advised to teach on planning and sequencing of activities for this practical. They should remind the candidates to stick to the sequence laid down as it helps them organize themselves. They should also expose the candidates to a lot of practicals to improve their competence when handling examinations.