

3.7 HOME SCIENCE (441)

The year 2012 Home science examination tested mastery and application of knowledge and skills as specified in the syllabus. This year's report analyses the performance of candidates both in the theory and practical paper. It concentrates on the poorly performed items.

The report analyses the expected responses, the weaknesses of the candidates in the poorly performed items. It goes further to give recommendation to the teachers on how to improve the teaching/learning processes for future learning and examinations.

Paper 1 (441/1) Home Science Theory

This is a theory paper which comprises three sections worth 100 marks as follows:

Section A: consists of short structured questions worth 40 marks.

Section B: consists of one compulsory application question worth 20 marks.

Section C: consists of essay questions worth 20 marks each. Candidates are required to answer any two out of the three questions.

Paper 2 (441/2) Clothing Construction

This is a practical paper which tested the candidates on skills in clothing construction. The paper is worth **45 marks**.

Paper 3 (441/3) Foods and Nutrition

This is a practical paper which tested on skills in Foods and Nutrition worth 25 marks. Candidates were required to prepare and serve a meal. It is considered a project paper and is assessed by the teachers at the school.

3.7.1 CANDIDATES GENERAL PERFORMANCE

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

Table 14: Candidates' Performance in the last four years.

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2009	1	12,312	100	50.10	12.93
	2		70	36.05	9.68
	overall		170	86.12	19.47
2010	1	12,322	100	54.76	11.43
	2		70	38.36	9.22
	overall		170	93.08	18.60
2011	1	12,995	100	53.27	12.47
	2		70	24.88	7.54
	Overall		170	78.15	17.79
2012	1	13,463	100	57.98	11.35
	2		45	24.92	7.98
	3		25	14.26	2.60
	Overall		170	96.84	19.16

Candidates overall performance in Home Science in the years 2009, 2010, 2011 and 2012

Observations from the above table:

- (i) Candidature increased by 468(3.6%) from the previous year 2011.
- (ii) For computation of this year's final score, all papers were graded separately and then combined unlike previously where marks for paper 2 and paper 3 were combined to give a final score for the practical component.
- (iii) The mean increased significantly in 2012 by 16.69 (21.36%) indicating a better performance.

Analysis of the poorly performed questions

3.7.2 Home Science Paper 1 (441/1)

SECTION A

Question 3

Outline two precautions to take when handling calabashes

(2marks)

Requirement

To outline precautions to take when handling calabashes.

Weaknesses

Some candidates had no idea of what a calabash is and therefore could not answer the question.

Expected responses

Precautions to take when handling calabashes:

- avoid banging or hitting with heavy objects
- do not expose to naked flame
- always store in a cool, dry place.
- avoid scrubbing the inside
- avoid soaking/steeping

any 2 x 1 = 2 marks

Advice to teachers

Expose learners to all materials used for making kitchen equipment.

Question 4

Give two reasons for using dried fruits in cake making

(2marks)

Requirement

To give reasons for using dried fruits in cake making

Weaknesses

The learners discussed the use of fruits generally in cake making not paying attention to the use of dried fruits.

Expected responses

Reasons for using dried fruits in cake making: To;

- enrich
- preserve
- add flavour
- improve texture
- improve appearance

2 x 1 = 2 marks

Advice to teachers

The learners should read questions carefully to be able to understand all the details being asked in a question.

Question 6

Give two methods of removing dust from surfaces in a home

(2marks)

Requirement

To give the methods of removing dust from surfaces in a home

Weaknesses

Some candidates mentioned the equipment used for cleaning instead of the methods.

Expected responses

Methods of removing dust from surfaces in a home:

- sweeping
- dusting
- brushing
- suction
- dispersal

2 x 1 = 2 marks

Advice to teachers

Expose the learners to the different methods of cleaning. Learners need to differentiate between the procedure, methods and equipment for cleaning

Question 11

State two benefits of manipulative play

(2marks)

Requirement

To state the benefits of manipulative play

Weaknesses

Some candidates gave their responses on the general benefits of play without referring to manipulative play as the question required.

Expected responses

Benefits of manipulative play. It:

- enables children to exercise their limbs/their muscles/strength
- enables children to enjoy play
- teaches size, colours, volume and shapes
- improves co-ordination.

any 2 x 1 = 2 marks

Advice to teachers

During classroom instruction the different types of play should be well differentiated

Question 15

Give two reasons for starching articles

(2marks)

Requirement

To give the reasons why articles are usually starched during laundering

Weaknesses

Some candidates could not distinguish between starching and bleaching

Expected responses

Reasons for starching articles. To:

- restore body and feel of the article
- improve appearance
- give article glossy surface (crease resistant)
- make them dirt resistant
- making them crease resistant

any 2 x 1 = 2 marks

Advice to teachers

All types of special treatment in laundry should be taught well in both theory and practice where possible so that the learners can appreciate the role of each process.

Question 16

State two precautions to take when laundering viscose rayon

(2marks)

Requirement

To state the precautions one needs to bear in mind as they launder viscose rayon.

Weaknesses

Some candidates could not demonstrate knowledge of the characteristics of viscose rayon and the care needed when laundering.

Expected responses

Precautions to take when laundering viscose rayon:

- do not rub or twist
- dry under the shade/away from sunlight
- dry evenly
- use a warm iron
- iron when damp.
- use kneading and squeezing method

Advice to teachers

Expose the learners to the different types of fibres and the type of care each fibre requires during the laundering process.

Question 17

Give two examples of inconspicuous seams

(2marks)

Requirement

To write down examples of inconspicuous seams.

Weaknesses

Some candidates could not differentiate between conspicuous and inconspicuous seams.

Expected responses

Examples of inconspicuous seams are:

- Plain
- Open seam
- French seam.

2 x 1 = 2 marks

Advice to teachers

Learners need to be taught well on the types of seams and practise making the seams in order to appreciate the differences and their distinct functions.

Question 20

Differentiate between trimmings and trimming as used in clothing construction

(2marks)

Requirement

To give the differences between trimmings and trimming as used in clothing construction

Weaknesses

The two terms confused the candidates and could therefore not bring out the differences.

Expected responses

Difference between trimmings and trimming in clothing construction.

- Trimmings are sewing notions used for decorating garments such as laces and bias binding while
- Trimming is the action of cutting off excessive fabric on seams or edges of fabric.

Advice to teachers

The learners to be exposed to the similar terms with different meanings so as to avoid confusing terms.

Question 21

Complete the following table on classification of fibres.

FIBRE	CLASS
Viscose Rayon	
Elastofibre	
Polyester	
Asbestos	

(2 marks)

Requirement

To match fibres into their respective classes in the given table.

Weaknesses

Most of the candidates guessed to complete the table.

Expected responses

Completing the table on classification of fibres

Fibre	Class
Viscose rayon	Regenerated fibres (½ mark)
Elastofibre	Synthetic (½ mark)

Polyester	Synthetic (½ mark)
Asbestos	Mineral (½ mark)

4 x ½ mark = 2 marks

Advice to teachers

The topic on classification of fibres should be taught in detail.

Question 23

- (a) Giving a reason in each case, state **four** rules to observe when making short crust pastry. (8 marks)
- (b) Explain **three** hygiene practices to observe during food storage. (6 marks)
- (c) Explain **three** points to take into account when buying quality baking tins. (6 marks)

Requirement

- a) Explaining rules to observe when making short crust pastry
- b) Explaining hygiene practices to observe during food storage.
- c) Explaining points to note to ensure quality when buying baking tins.

Weaknesses

- a) Candidates gave their responses on flour mixtures instead of pastries.
- b) Candidates concentrated more on personal hygiene instead of general hygiene practices in food storage.
- c) Candidates could not give the factors to consider when buying quality baking tins.

Expected responses

- (a) Rules to observe when making short crust pastry:
- all ingredients must be weighed accurately to come up with a quality product
 - the mixture should be aerated as much as possible to allow proper raising of the product
 - pastry should be kept as cool as possible to avoid the fat melting
 - the pastry should be handled as little as possible to avoid hardening the product
 - the pastry should be rolled on a light floured surface to avoid sticking
 - pastry should be rolled with light to and fro movement to avoid extracting the trapped air
 - the pastry should be baked in a fairly hot oven so that the water is quickly turned to steam to puff up the pastry
 - all measured liquids should be added at once to give an even texture.
- any 4 x 2 = 8 marks
- (b) Hygiene practices to observe during food storage:
- storage equipment such as refrigerators, kitchen stores, must be kept clean at all times to avoid attracting pests and micro-organisms
 - the principal of first in, first out should be practiced when storing foods to prevent food spoilage
 - containers used to hold cooked food should be free from cracks and chips to avoid harbouring micro-organisms
 - dry foods should be stored in well ventilated storage places which are free from pests

to avoid spoilage.

- Food should be covered or wrapped during storage to avoid contamination

any 3 x 2 = 6 marks

c) Points to take into account when buying baking tins to ensure they are of good quality:

- buy reliable and tested products as these are more likely to be of reasonable standards and good value for money
- insist on a warranty as this is a good indicator of the quality of the item
- buy from reliable and established dealers as they are dependable
- buy renowned brands as they are a symbol of quality.
- buy rust-free tins to avoid poisoning, discolouration or altering the taste of food
- buy one that is smoothly finished to avoid injuries and ease of cleaning

any 3 x 2 = 6 marks

Advice to teachers

Expose learners to practise on the making of pastries.

Differentiate between different types of hygiene; personal, food, kitchen.

Question 24

a) Outline the steps followed in making pin tucks.

(6marks)

Requirement

To outline the steps followed in making pin tucks.

Weaknesses

Most students had no idea of what pin tucks are, most guessed the answers.

Expected responses

- (a) Steps followed in making pin tucks:
- mark the position of the tucks
 - fold the fabric appropriately/on straight grain on the RS
 - hold the tucks with temporary stitches close to the fold
 - stitch close to the fold
 - work as above, until all tucks are made
 - remove the temporary stitches and press.

correct sequence 6 x 1 = 6 marks

Advice to teachers

All the different types of tucks should be taught in detail.

3.7.3 Home Science Paper 2 (441/2) Clothing Construction

This is a practical paper where candidates are required to demonstrate their skills in clothing construction by making a sample of a garment as per the instructions. Patterns and sketches are provided for them to use in the examination.

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

Materials provided

1. Pattern pieces
 - A. Bodice front
 - B. Bodice back
 - C. Skirt front
 - D. Skirt back
 - E. Sleeve
 - F. Collar
 - G. Cut out a crossway strip measuring 18 cm long by 4cm wide.
2. Plain light weight cotton fabric 70 cm long by 90 cm wide.
3. Cotton sewing thread to match the fabric.
4. One large envelope.

THE TEST

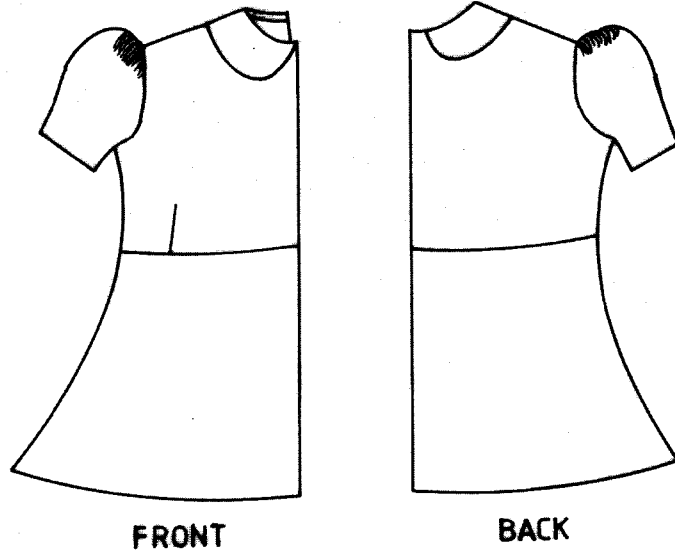
Using the materials provided, cut out and make the **LEFT SIDE** of the girl's dress to show the following processes:

- (a) making of the dart at the front bodice;
- (b) making of a shoulder seam using a double stitched seam;
- (c) making of the side seam on bodice and skirt using an open seam;
- (d) attaching of the bodice pieces to the skirt pieces using a plain seam and neatening *half* of the back seam using loop stitches.;
- (e) preparation of the collar.;
- (f) attaching of the collar using a crossway strip;
- (g) making of an underarm seam using an open seam;
- (h) preparation and attachment of the sleeve. **Do not trim or neaten the seam allowance.**

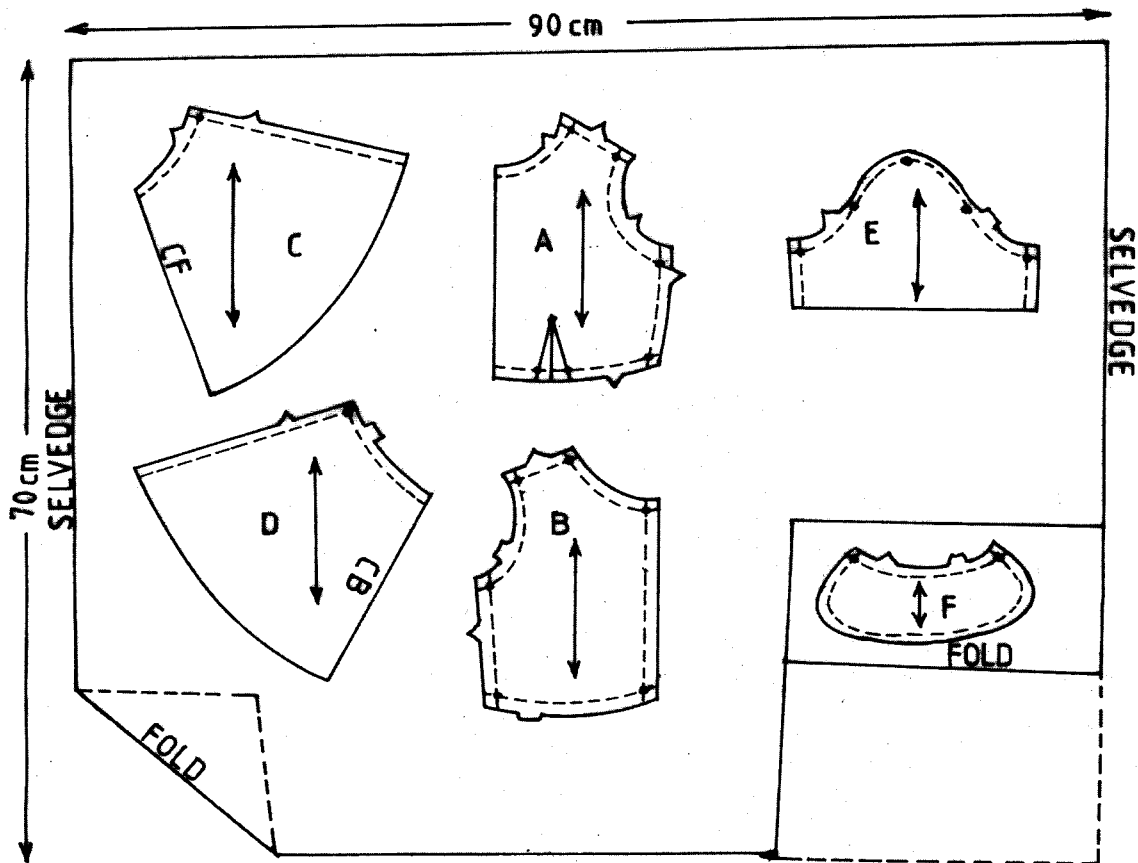
OMIT

The management of the lower hem of the skirt and the sleeve.

DRESS VIEW



LAYOUT (NOT TO SCALE)



Weaknesses

- Most candidates did not cut out the fabric correctly.
- There was poor graining and use of crossway strip.
- Some candidates made darts that were of inaccurate length with the tapering and fastening

missing.

- Some candidates ignored the neatening of the open seams. They also did not press it open and flat.
- The correct thread for making the loop stitches was not used.
- The hand stitches and trimming were poorly done.
- In the preparation and attachment of the collar, no trimming, snipping, knife edge and sandwiching were done. The collar was poorly attached.
- In the preparation and attachment of the sleeve the hang was poor, the gathers were not made and the seams were poorly matched. Some did not follow the instructions of DO NOT TRIM OR NEATEN.
- Some candidates did not remove the tacking when presenting their work.
- Attachment of the labels on the fabric was poorly done.

Advice to teachers

The teachers should not provide extra materials such as interfacing during the examination. More practice in clothing construction processes should be encouraged so that the learners acquire skills and confidence to perform tasks well.