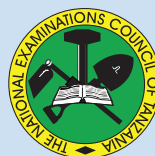




**THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA**



**STUDENTS' ITEM RESPONSE ANALYSIS REPORT
ON THE FORM TWO NATIONAL ASSESSMENT
(FTNA) 2021**

HOME ECONOMICS



THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA



STUDENTS' ITEM RESPONSE ANALYSIS REPORT
ON THE FORM TWO NATIONAL ASSESSMENT
(FTNA), 2021

050 HOME ECONOMICS

Published by
National Examinations Council of Tanzania
P.O. Box 2624
Dar es Salaam, Tanzania.

© The National Examinations Council of Tanzania, 2022

All rights reserved.

TABLE OF CONTENTS

FOREWORD.....	iii
1.0 INTRODUCTION	1
2.0 ANALYSIS OF THE STUDENTS' PERFORMANCE ON EACH QUESTION	2
2.1 Section A: Objective Questions	2
2.1.1 Question 1: Multiple Choice Items	2
2.1.2 Question 2: Matching Items	8
2.2 Section B: Short Answer Questions	10
2.2.1 Question 3: The Kitchen	10
2.2.2 Question 4: Sanitation in the House.....	14
2.2.3 Question 5: Laundry.....	18
2.2.4 Question 6: Introduction to Sewing	22
2.2.5 Question 7: Cooking Foods.....	27
2.2.6 Question 8: Maternal and Child Health	33
2.2.7 Question 9: Food and Nutrition	37
2.3 Section C: Essay Question	41
2.3.1 Question 10: An Ideal House	41
3.0 ANALYSIS OF STUDENTS' PERFORMANCE PER TOPIC	47
4.0 CONCLUSION	47
5.0 RECOMMENDETATIONS	48
Appendix A: Summary of Analysis of the Students' Performance on Each Topic 2021	49
Appendix B: Students' Performance	50

FOREWORD

The National Examinations Council of Tanzania is delighted to issue this report on Students' Item Response Analysis (SIRA) in the Home Economics subject for the Form Two National Assessment (FTNA), 2021. The assessment measures the skills the students acquired in their two years of secondary education. This Students' Item Response Analysis report has been prepared to provide feedback to the candidates, teachers, parents, policymakers and the public on the performance of the students.

The analysis presented in this report highlights factors that contributed to the students' performance on each question. The factors which made most of the students to perform well are their ability to address the requirements of the questions and their knowledge of the concepts related to the subject matters tested. Poor performance on some questions was due to the students' failure to identify the demands of the questions, misconceptions and lack of knowledge about the concepts related to the subject matter. The feedback provided will enable education administrators, school managers, teachers and students to take appropriate measures to improve students' knowledge acquisition and performance in the future assessments administered by the Council.

The National Examinations Council of Tanzania is grateful to all who participated in the preparation of this report.



Dr Charles E. Msonde
EXECUTIVE SECRETARY

1.0 INTRODUCTION

This report analyses the students' performance in the Home Economics Form Two National Assessment (FTNA), which was done in November 2021. The assessment measured the competences acquired by the Form Two students per the Home Economics Syllabus for Secondary Education of 2020.

The Home Economics paper had three sections: A, B and C, with 10 questions. Section A had two objective questions, whereby Question One was a multiple-choice question with ten items and Question Two was a matching-item question with five items. Section B had seven short-answer questions, and Section C had one essay question. The students were required to answer all questions in this paper.

A total of 5,425 students (100%) sat for this assessment. Among them, 2,403 (44.34%) passed. Results indicate that 12 students (0.2%) scored A; 63 students (1.2%) scored B; 873 (16.1%) scored C; 1,455 students (26.8%) scored D and 3,016 students (55.66%) failed by scoring F. In general, the students' performance in this subject in 2021 was average. These results graded as A, B, C, D and F were based on the score intervals, ranging from 75 to 100, 65 to 74, 45 to 64, 30 to 44 and 0 to 29 respectively.

In this report, the performance of students on each question is regarded as good if the scores range from 65 to 100 per cent, average if the scores range from 30 to 64 per cent and weak if the scores range from 0 to 29 per cent. These three categories of performance indicated by using green, yellow, and red colours which denote good, average and weak performance levels respectively.

The report also analyses the students' responses to each question by explaining the requirement of the question and the percentage of the students who attempted the question with their scores and the reasons for such performance. Extracts from the students' scripts, graphs, charts and table inserted to illustrate the reported information. Lastly, the report provides the analysis per topic, a conclusion and recommendations for improving students' performance in the future assessments.

2.0 ANALYSIS OF THE STUDENTS' PERFORMANCE ON EACH QUESTION

2.1 Section A: Objective Questions

Section A consisted of two (02) questions. Question One comprised 10 multiple-choice items, and Question Two consisted of five matching items. One mark was allotted to each item in both questions. Therefore, the section carried 15 marks.

2.1.1 Question 1: Multiple Choice Items

This question required the students to choose the correct answer from four given alternatives and write its letter in the box provided. The items composed from the topics of *Basic Sewing Stitches, Cooking Foods, Food and Nutrition, Introduction to Home Economics, An Ideal House, Introduction to Sewing, the Kitchen, Laundry and Material and Child Health.*

All 5,425 students attempted the question. The analysis shows that 662 students (12.2%) scored from 0 to 2 mark; 3,456 (63.7%) scored from 3 to 6 marks and 1,307 (24.1%) scored from 7 to 10 marks. This performance is illustrated in Figure 1.

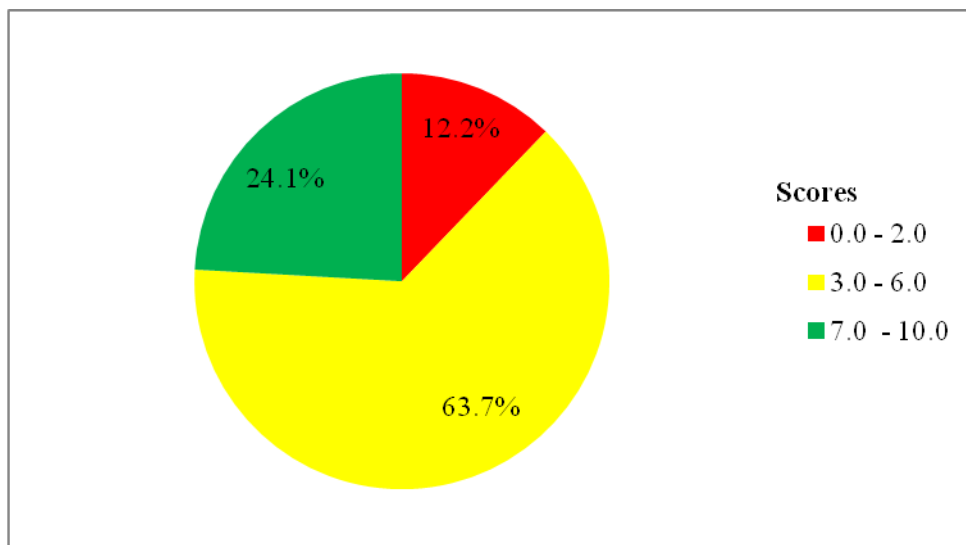


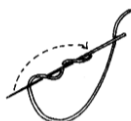
Figure 1: Students' Performance on Question 1

Figure 1 indicates that the performance on this question was good because 87.8 per cent of the students attained average performance or above. This

implies that the students had adequate knowledge of the content covered by these items.

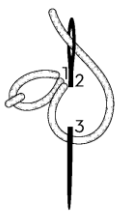
Despite the good performance observed on this question, 12.2 per cent of the students attained weak performance. The following is the analysis of students' response to each item, from (i) to (x):

- (i) *One of the tailoring students presented to you the following procedure of stitching. Which type of stitch represented the stitching?*



- | | | | |
|---|--------------------|---|-----------------------|
| A | <i>Lazy daisy</i> | B | <i>Loop stitch</i> |
| C | <i>French knot</i> | D | <i>Feather stitch</i> |

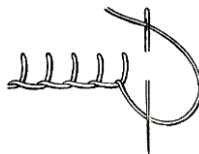
The correct answer was *C French knot*. The students who chose this response were aware that French knot is made by winding the thread around the needle. Those who chose *A Lazy daisy*, *B Loop stitch* and *D Feather stitch* had insufficient knowledge about the procedures for working various decorative stitches. The students did not understand that lazy daisy stitch is a simple loop arranged in groups to create flowers. Loop stitch is made by bringing the thread around the edge of the fabric and back through the same spot as the first stitch. Likewise, feather stitch consists of line diagonal blanket stitches worked alternatively to the left and right. The following diagrams represent the procedures for stitching Lazy daisy, Loop stitch and Feather stitch.



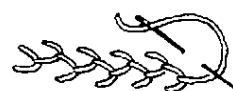
Lazy daisy stitch



Loop stitch



Feather stitch



These students lacked practice in drawing and sewing skills. Hence, they failed to identify the correct stitching procedure.

- (ii) *A dry heat cooking methods can cause most of the food to become dry. How would you prevent this problem when barbecuing?*

- | | | | |
|---|---------------------------------|---|-------------------------------------|
| A | <i>Marinate using spices</i> | B | <i>Brush it with fat or oil</i> |
| C | <i>Turn it regular interval</i> | D | <i>Grill only for a short while</i> |

The correct answer was *B brushing it with fat or oil*. The students who chose the correct response understood that brushing food with fat or oil would moisten the food during barbecuing. The students who chose *A Marinate using spices* did not understand that marinating is a process of soaking meat or fish in a seasoned liquid before cooking to enhance flavour and tenderise it. Those who chose *C Turn it at regular interval* failed to understand that turning food at regular interval will prevent burning and allow even cooking. In contrast, the students who chose *D Grill only for a short time* did not understand that, by doing this, the food will not cook well. Undercooked food may contain potentially dangerous bacteria that can lead to illness and food poisoning.

(iii) *An old woman is advised by a nutritionist to consume the food that contains essential amino acids. What kinds of food will you prepare for her?*

- | | |
|------------------------------------|---------------------------------|
| <i>A Okra, cabbage and beans</i> | <i>B Fish, meat and beans</i> |
| <i>C Mango, grapes and oranges</i> | <i>D Rice, maize and millet</i> |

The correct answer was *B Fish, meat and beans*. The students who chose the correct response understood that essential amino acids are molecules that combine to form protein. Fish, meat and beans are protein foods required by an old woman for building and repairing worn out tissues. The students who chose *A Okra, cabbage and beans* and *C Mango, grapes and oranges* were not aware that these protective foods are required by old people in fair amounts compared to protein foods. In contrast, the students who chose *D Rice, maize and millet* failed to understand that those are energy giving foods, which an old woman requires very little because she does not do many activities.

(iv) *A widowed woman is responsible for the care of the family as well as the bread earner for the family. How would you advise her to be independent?*

- | | |
|---|---------------------------|
| <i>(a) Sewing different articles and selling them to the market.</i> | |
| <i>(b) Selling household articles available at home.</i> | |
| <i>(c) Preparing snacks and bites and selling them as a local vender.</i> | |
| <i>(d) Planting vegetables and fruits and selling them to get money.</i> | |
| <i>A (b), (c) and (d)</i> | <i>B (a), (b) and (d)</i> |
| <i>C (a), (b) and (c)</i> | <i>D (a), (c) and (d)</i> |

The correct answer was *D (a) Sewing different articles and selling them to the market, (c) Preparing snacks and bites and selling them as a local*

vendor, (d) *Planting vegetables and fruits and selling them to get money.* The students who chose the correct responses were aware that being independent is to demonstrate financial independence or not depending on another for livelihood. Thus, entrepreneurship or starting business is the best way that can help a widowed woman as a bread earner of the family to take care for the family. Conversely, the students who chose the incorrect response, *B selling household articles available at home*, did not understand that this would lead the family to poverty.

(v) *You have been given money to rent a room near the school. Which factors would you use to select a suitable room?*

A *Availability of a bookshop*

B *Security from criminals*

C *Accessibility to recreational places*

D *Availability of playing grounds*

The correct answer was *B Security from criminals*. The students who chose the correct response understood that a house is a place to live; hence, it should be safe from harm. Those who chose incorrect responses *A Availability of a bookshop*, *C Accessibility to recreational places* and *D Availability of playing grounds* did not understand that bookshops, recreational places and playing grounds can be accessed at school. Hence, they could not be important factors to consider when a student rents a house.

(vi) *You have finished cutting the garment pieces using the printed pattern, now you want to transfer pattern markings. Which types of equipment would you use?*

A *Measuring gauge, ruler and carbon paper*

B *Tracing wheel, tailor's chalk and Tracing paper*

C *Dressmakers pencil, carbon paper and long ruler*

D *Long ruler, carbon paper and tracing wheel*

The correct answer was *B Tracing wheel, tailor's chalk and tracing paper*. The students who chose the correct response had sufficient knowledge about the uses of the tracing wheel, tailor's chalk and tracing paper. Those who chose incorrect responses *A Measuring gauge, ruler and carbon paper*, *C Dressmakers pencil, carbon paper and long ruler*, *D Long ruler, carbon paper and tracing wheel* did not understand that the measuring gauge, ruler, and long ruler are measuring pieces of equipment. The

measuring gauge is used for measuring narrow sections of clothes like those that hems and rulers are used when drafting patterns.

(vii) *Your friend received a gift of the kitchen equipment indicated below but she is not familiar with it. Which function does this equipment perform?*



- A Draining vegetables and pasta*
- B Dusting the work surface with flour*
- C Sieving flour and straining tea*
- D Grating fruits and vegetables*

The correct answer was *D grating fruits and vegetables*. The students who chose the correct response had adequate knowledge of the use of the grater. Those who chose *A Draining vegetables and pastas* mixed up the use of the grater with that of colander. Those who chose *B dusting the work surface with flour* mixed up the use of dredger with that of the grater. Furthermore, the students who chose *C Sieving flour and straining tea* did not understand that sieve used for sieving flour and straining tea. This implies that the students had inadequate knowledge of kitchen equipment and its uses. The following diagrams show a colander, flour dredger and sieve used for the functions described in distracters A, B, C, respectively.



Colander



Flour dredger



Sieve

(viii) *A number of students in your school are affected by skin diseases, what advice would you provide?*

- A To use disinfectants when laundering clothes.*
- B To put starch on clothes during laundering.*
- C To make use of water softeners when washing.*
- D To use hot water when washing clothes.*

The correct answer was *A To use disinfectants when laundering clothes*. The students who chose this response had sufficient knowledge of the use of disinfectants in the laundry. These students were aware that skin diseases can be caused by poor personal hygiene. Hence washing clothes using disinfectants might help to kill germs that cause infection. Those who chose incorrect response *B To put starch on clothes during laundering* did not understand that starch in the laundry is used to add body to fabrics. The students who chose *C To make use of water softeners when washing* failed to understand that water softeners are used to soften water by removing hard minerals from water. Moreover, the students who chose *D To use hot water when washing clothes* did not understand that hot water in the laundry has the most cleaning power as it enhances chemical reaction of the detergent.

(ix) *Lactating mothers are advised to feed their babies using a cup and spoon instead of a bottle and teat. Why is this practice recommended?*

- A They promote mother to child relationship.*
- B They promote good feeding habits.*
- C They do not require preparation before.*
- D They maintain the milk temperature.*

The correct answer was *B They promote good feeding habits*. The students who chose the correct answer were knowledgeable about proper ways of feeding babies. They understood that to feed a baby using a cup and spoon is a good feeding habit rather than using a teat because they are safer and easier to clean. Students who chose *A They promote mother to child relationship* failed to understand that breastfeeding promotes mother to child relationship. Likewise, those who chose *C They do not require preparation before* failed to understand that this is the advantage of breastfeeding. Moreover, those who chose *D They maintain the milk temperature* failed to realize that feeding using a cup and a spoon may reduce milk temperature easily and, if not used correctly, may allow contamination.

- (x) *Your class teacher complained about improper care of brooms which resulted into frequent purchasing. How would you advise your fellow students on the proper care of brooms?*
- A *To hang them with their bristles down.*
- B *To store in place where cleaning is done.*
- C *Using them for the intended purpose.*
- D *Never remove fluffy when storing.*

The correct answer was *C Using them for the intended purpose*. The students who chose the correct response had sufficient knowledge of the proper care of brooms. These students understood that there are various types of brooms such as soft and hard brooms. Therefore, to last longer they should be used appropriately. Those who chose incorrect answer *A To hang them with their bristles down* did not understand that standing or hanging brooms on their bristles can make them bend or break. Those who chose *B To store in place where cleaning is done* were not aware that brooms should be stored in a well ventilated room in a hidden place to make the house look clean and attractive. The students who chose *D Never remove fluffy when storing* did not understand that the accumulation of loose fluffy might damage the brooms. These students lacked sufficient knowledge of proper care of brooms.

2.1.2 Question 2: Matching Items

This question consisted of five matching items derived from the topic of *Basic Sewing Stitches*. This question required the students to match the function of stitches in List A with their corresponding names in List B by writing the letter of the correct response below the corresponding item number in the table provided.

<i>List A</i>	<i>List B</i>
(i) <i>Useful for holding seams and hems in position particularly on heavy material.</i>	A <i>Diagonal tacking</i>
(ii) <i>Used to hold two pieces of material and match the stripes correctly</i>	B <i>Even tacking</i>
(iii) <i>Useful for preventing pieces of material from slipping out of position while sewing</i>	C <i>Herringboning</i>
(iv) <i>Applicable for marking position of notches, darts, buttonholes and tucks</i>	D <i>Invisible hemming</i>
(v) <i>Used to mark stitching line, pleat line using double thread on double fabric forming a series of loops</i>	E <i>Long and short tacking</i>
	F <i>Slip basting</i>
	G <i>Thread Marking</i>
	H <i>Thread Marking</i>

The question was attempted by 5,421 (99.9%) students. Only four (4) students (0.1%) did no attempt this question. The data indicates that 4,284 (79%) students scored from 0 to 1 marks; 1,080 (19.9%) scored from 2 to 3 marks; and 57 (1.1%) scored from 4 to 5 marks. Figure 2 illustrates this performance.

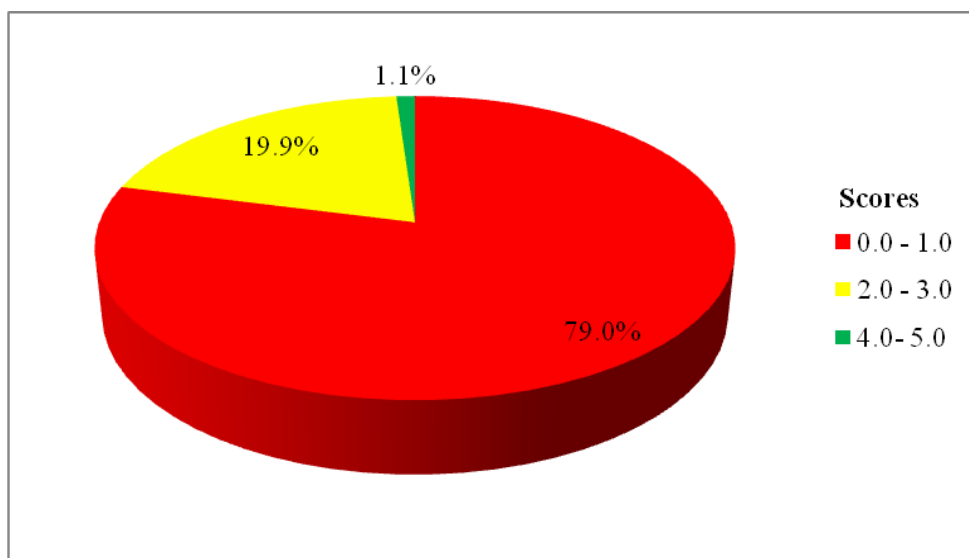


Figure 2: *Students' Performance on Question 2*

Figure 2 shows that the students' general performance on this question was poor as 1,137 (21.1%) scored from 3 to 5 marks. The student's general performance on this question was due to their insufficient knowledge of the functions of various temporary stitches.

Analysis indicates that item (i) required the students to match the statement that stated, *Useful for holding seams and hems in position particularly on heavy material* with one of the alternatives given. The correct response was *E Long and short tacking*. The students who correctly matched them understood that there were various types of tacking stitches, but long and short tacking was the one suitable for heavy materials. Those who failed to match correctly chose *B Even tacking*. These students did not understand that even tacking is used for tacking seams and hems securely, but it is not suitable for heavy fabrics.

Item (iii) stated, *Useful for preventing pieces of material from slipping out of position while sewing*. The correct response was *A Diagonal tacking*. The students who correctly matched them understood that diagonal tacking

controls the shifting of fabric during pressing, fitting and construction. However, those who matched with *F Slip basting*, mixed up diagonal tacking with slip basting. They failed to understand that diagonal tacking used for holding two or more pieces of material to prevent slipping, while slip basting used to match patterns on seams and another joining.

Item (iv) stated, *Applicable for marking position of notches, darts, buttonholes and tucks*. The correct answer was *H Tailors tacking*. The students who correctly matched them understood that tailor's tacking is used for marking small areas on a garment. Those who incorrectly matched it with *G thread marking* mixed up two types of tacking stitches as both are used for marking; however, they differ because tailors tacking is used for making notches, darts, pockets, tucks and buttonholes while thread marking is used for marking extended areas such as seam line, hemline and pleat line

Item (v) stated, *Used to mark stitching line, pleat line using double thread on double fabric forming a series of loops*. The correct answer was *G Thread Marking*. The students who correctly matched them understood that thread marking can be used instead of tracing wheels and paper as it can be used to mark a large area compared to tailor's tacking. Those who scored high marks correctly matched the items.

2.2 Section B: Short Answer Questions

Section B comprised seven short-answer questions from seven topics namely *The Kitchen, Sanitation in the House, Laundry, Introduction to Sewing, Cooking Foods, Maternal and Child Health and Food and Nutrition*. Each question had 10 marks, giving a total of 70 marks.

2.2.1 Question 3: The Kitchen

The question measured the students' competence in kitchen planning. The question stated,

Your neighbour asked you to help in planning a kitchen in her new modern house.

- (a) *Suggest five characteristics of a good kitchen.*
- (b) *Draw the L – shaped kitchen plan to indicate three working centres.*
- (c) *Briefly describe the work triangle concept.*

The question was attempted by 5,425 (100%) students. Among them, 1,331 (24.5%) scored from 0 to 2.5 marks; 2,955 (54.5%) scored from 3 to 6 marks; and 1,139 (21%) scored from 6.5 to 10 marks. This performance is summarized in Figure 3.

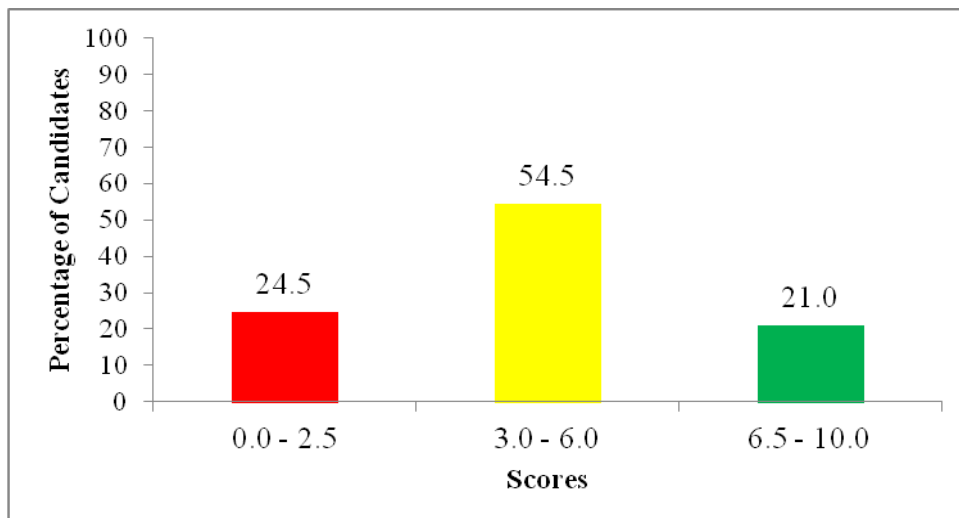


Figure 3: *Students' Performance on Question 3*

Figure 3 shows that the general performance on this question was good because 4,104 (75.5%) students attained average performance or above. This indicated that the students had sufficient knowledge of kitchen planning.

In part (a), 21.0 per cent of the students correctly described the characteristics of a good kitchen. These students might also have practical experience gained from working in the kitchen since food is normally prepared in the kitchen, and food preparation is a daily routine in the home. This enabled them to provide the correct response. Some of the correct responses were *a good kitchen should have storage facilities example cabinets and cup boards; floor should not slippery, should be near to the dining room, good kitchen should be well planned with equipments, good kitchen should be large enough for easy movement during preparation of food, should be well ventilated, should have enough light both natural and artificial sources*. Similarly, in part (b), the students correctly drew diagrams of an L-shaped kitchen plan and indicated three working centres. However, they failed to locate the centres correctly to indicate the imaginary straight lines that join the three centres.

In part (c), the students correctly described the work triangle concept. They were aware that work triangle should consist of three working centres, namely the refrigerator, sink and cooker. For example, one student wrote, *Work triangle concept it involve three working centres which are storage area, washing area and cooking area whereby it is well planned to avoid accident and saves time and energy during preparation of food.* Another one wrote, *Working triangle concept involves cooker, sink and refrigerator planned to save time during food preparation.* In fact, work triangle is an imaginary straight line drawn from the centre of the sink, to the centre of the refrigerator, to the centre of the cook top and finally back to the sink forming a triangular shape

Despite the good performance on this question, analysis shows that 1,333 (24.5%) students attained weak performance. Among them, 292 (5.4%) scored zero. In part (a), some students misinterpreted the question's requirements. Instead of writing the characteristics of a good kitchen, they wrote about the kitchen plan by explaining their centres. For example, one student wrote, *Should be cooking centre, should be working centre, should be washing centre, and should be preparing of food and service.* Others failed to express themselves fluently using appropriate words; hence, they used Kiswahili to answer the question. For example one student wrote, *kuosha ndoo na kujaza maji, kuwe na meza ya kukatia, kuwe na meza ya kuwekea vitu, kuwe na madirisha makubwa*, which were also incorrect answers.

Part (b) required the students to draw an L-shaped kitchen plan to indicate three working centres. Some students drew irrelevant diagrams such as a man and pregnant women, sketch of a kitchen with different pieces of equipment, chair and table. In part (c), some of the students copied words from Question 2. For example, one student wrote, *silp basting, even tacking, diagonal tacking.* Others wrote irrelevant answers; for example, one student wrote, *Work triangle concept is used for working areas in the kitchen for prepared of food.* These answers show that the students did not understand the concept of a kitchen plan. A sample of the poor responses is shown in Extract 3.2

3. Your neighbour asked you to help in planning a kitchen in her new modern house.

(a) Suggest five characteristics of a good kitchen.

(i) it should be good all the time

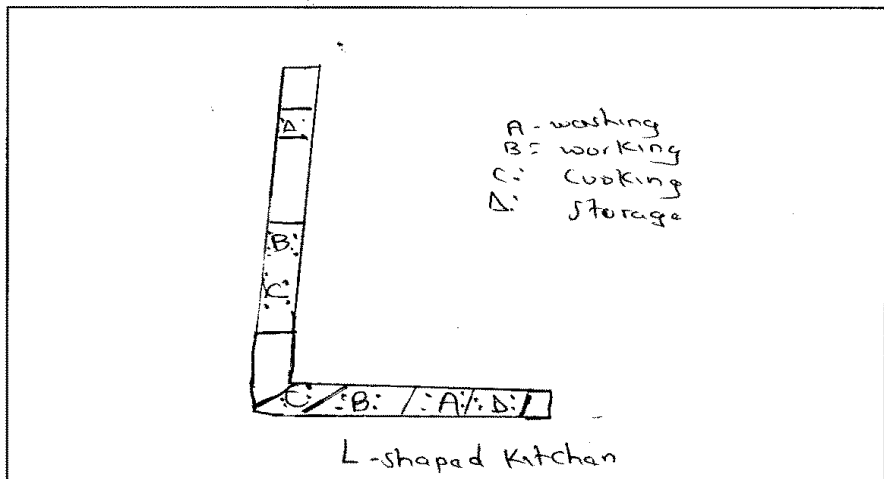
(ii) it should be arrange all the time

(iii) Kitchen should be good all the time

(iv) washing in the cap: all the time

(v) it should be good all the time

(b) Draw the L-shaped kitchen plan to indicate three working centres.



(c) Briefly describe the work triangle concept.

I. L-shaped Kitchen

II. U-shaped Kitchen

III. Corridor shaped Kitchen

IV. one wall kitchen

Extract 3.2: A sample of students' incorrect responses to Question 3

Extract 3.2 shows a sample of the incorrect responses to the question. In part (a), the student wrote irrelevant responses. In part (b), the student drew the L-shape diagram but failed to indicate the working centres. In part (c), instead of describing the work triangle concept, he/she listed the types of kitchen plans. The student was not aware that the work triangle is the theory that states the kitchen's three main work areas that form a triangular shape. This shows that the student had insufficient knowledge about the concept of kitchen planning.

2.2.2 Question 4: Sanitation in the House

This question measured the students' knowledge about sanitation in the home. The question asked,

Your head of school assigned you to prepare a presentation aiming at bringing awareness on sanitation. Prepare a morning talk on:

(a) *The causes of poor sanitation. (provide five causes)*

(b) *The effects of poor sanitation (provide five effects)*

The question was attempted by 5,425 (100%) students. The analysis shows that 2,240 (41.3%) students scored from 0 to 2.5 marks. Moreover, 2,416 (44.5%) scored from 3 to 6 marks, and 769 (13.2%) scored from 6.5 to 10 marks. This performance is summarized in Figure 4.

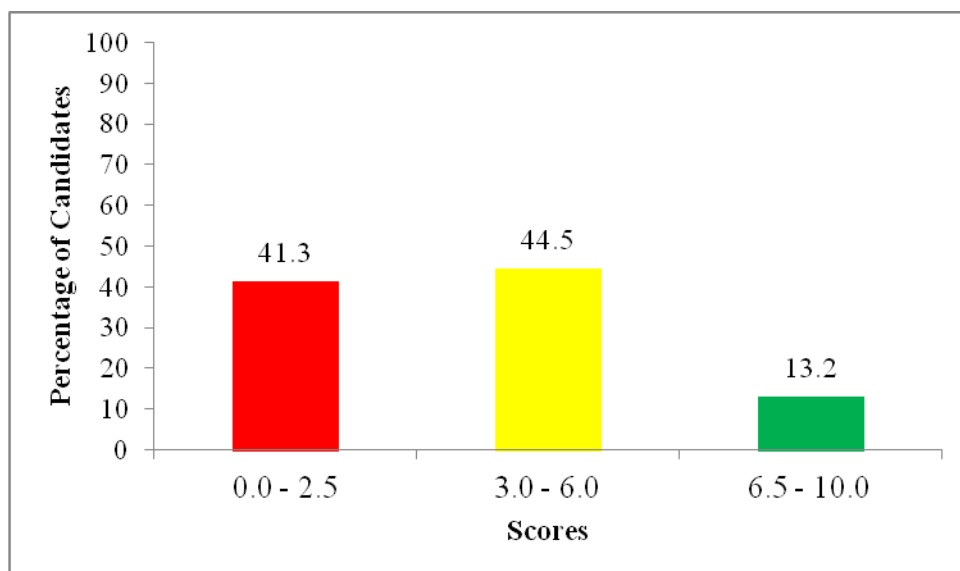


Figure 4: *Students' Performance on Question 4*

Based on the analysis from Figure 4, the general performance on this question was average because 57.7 per cent attained average performance or above. These students had sufficient knowledge of the causes and effect of poor sanitation, though some failed to provide sufficient explanation. Therefore, they attained average performance.

Analysis indicates that the students with good performance (13.2%) managed to provide the causes of poor sanitation in part (a), Some of the correct responses provided were *inadequate knowledge of waste disposal, overpopulation, in availability of water supply, poor urban planning of the settlement and lack of sanitation facilities*. Other responses were *the poor housing planning, the people's ignorance, lack of sanitation facilities, overcrowded living condition*. These students understood that poor sanitation occurs when people who live in particular settings do not have access to safe water and good sewage systems. They also live in a dirty environment.

In part (b), the students correctly explained the effects of poor sanitation. They understood that poor sanitation might result in the spread of diseases, environmental pollution, bad smell, breeding sites for pests and accidents like falls. For example, one student wrote, *Poor sanitation can cause unpleasant smell, spread of diseases like cholera, dirt environment, and breeding of dangerous insects and animals like snakes and centipede*. A sample of the good responses to the question is presented in Extract 4.1

4. Your head of school assigned you to prepare a presentation aiming at bringing awareness on sanitation. Prepare a morning talk on:

(a) The causes of poor sanitation. (Provide five causes).

- (i) Congestion in living areas. Many people live in one place leading to poor sanitation.
- (ii) Poor housing planning. Many houses in urban are not well planned leading to poor sanitation.
- (iii) Ignorance and lack of sanitation education. People are not well educated on the proper ways of sanitation.
- (iv) Poor waste disposal.
- (v) Lack of sanitation facilities.

(b) The effects of poor sanitation. (Provide five effects).

- (i) Diseases. When sanitation is not observed many diseases could have due to improper disposal of waste.
- (ii) Unslight environment. The environment can have a bad appearance due to open free drainage.
- (iii) Water pollution. This can be caused by pouring of the sewage in water bodies.
- (iv) Breeding of pests. Unnecessary dumping of waste water can cause breeding sites for mosquitoes.
- (v) Bad odours and smell. Disposing improperly of waste can cause many areas to have a bad smell.

Extract 4.1: A sample of the good responses to Question 4

Extract 4.1 shows a sample of the correct responses by a student who managed to address the question.

Further, the analysis shows that 19.1 per cent of the students scored zero. Some of them misunderstood the requirement of the question. Instead of providing the causes of poor sanitation, they provided the effects of poor sanitation in part (a). Likewise, in part (b), they provided the causes of poor sanitation instead of the effect of poor sanitation. In addition, some provided the types of wastes instead of the causes of poor sanitation. For example, one student wrote, *Human waste, industrial waste, food waste, solid waste and water waste*. Others left the part unanswered. Moreover, others provided irrelevant responses. For example, one student wrote, *lack of parent care, living bad with people in society, the society, the usage of bad language, conflicts, having a lot of stress*. Another one wrote, *skin disease of prepare a morning talk, the causes of poor sanitation is enough of time at presentation, aiming at bringing aware on sanitation, poor of community at bringing awareness on sanitation, lack of living in the environment at presentation aiming at bringing awareness on sanitation*.

All these responses were meaningless and were characterized with many grammatical errors, demonstrating poor command of the English language.

In part (b), some students misinterpreted the question and provided irrelevant responses. For example, one student wrote, *Develop bad relation, it causes bad behavior, lead into stresses, source of bad communication, cause of death*. These responses are not relevant to the question, but some of them are the consequences of bad manners. Another student wrote things which, when treated poorly, can cause poor sanitation such as *Environment like air in the environment and (water), low technology in the capital, animal and plant for example animal, human being (cow, lion) in plants examples are maize and beans, mineral in industry and community in the society to the environment*. A sample of the poor responses from a script of one student is shown in Extract 4.2

4. Your head of school assigned you to prepare a presentation aiming at bringing awareness on sanitation. Prepare a morning talk on:
- (a) The causes of poor sanitation. (Provide five causes).
- (i) It can cause the accident example suffocation
 - (ii) It can cause spread of disease example cholera, malaria
 - (iii) It can cause sick to the children in the environment
 - (iv) It can cause the environmental should be OK unattractive
 - (v) It can cause bad smells in the environment Example water pollution
- (b) The effects of poor sanitation. (Provide five effects).
- (i) No proper domestic animals Example goat, cow, and Hen
 - (ii) No lack of facilities example blood bucket
 - (iii) Poor building materials for making
 - (iv) Poor arrangement of thing to the environment
 - (v) Poor waste disposal of dirt Example broken glass and plastic bags

Extract 4.2: A sample of the students' poor responses to Question 4

In Extract 4.2, the student provided irrelevant responses to both parts of the question. This indicates that the student had insufficient knowledge of the causes and effect of poor sanitation.

2.2.3 Question 5: Laundry

The question measured the students' knowledge about laundry. The question stated,

One of your colleagues discovered that his cloth is getting worse after each wash. Hence, he asked for assistance. Before assisting him you discovered that he does not follow the washing instructions. Advise him on:

- (a) The importance of care labels during washing of clothes. (Give five points).*
- (b) The aim of sorting before starting washing clothes. (Give three points).*
- (c) The importance of airing and storing clothes after ironing.*

The question was attempted by 5,425 (100%) students. Among them, 3,568 (65.8%) scored from 0 to 2.5 marks; 1,499 (27.6%) scored from 3 to 6.0 marks; and 358 (6.6%) scored from 6.5 to 10 marks. Figure 5 summarizes this performance.

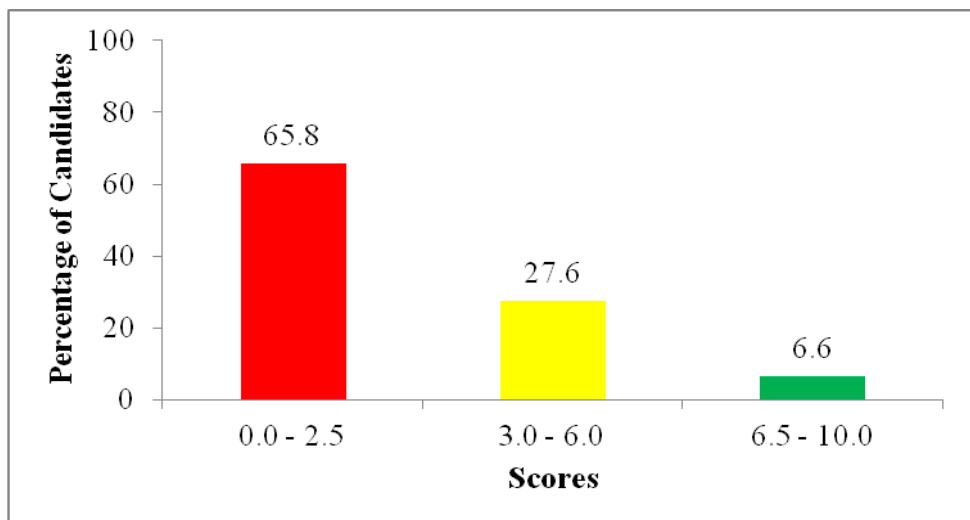


Figure 5: Students' Performance on Question 5

Figure 5 shows that the general performance on this question was average because 34.2 per cent of the students scored from 3 to 10 marks. This shows that the students had sufficient knowledge about laundry.

Analysis indicated that 6.6 per cent of the students with good performance had adequate knowledge of the laundry topic, especially about laundry processes. Very few students (0.3%) scored full (10) marks. These students correctly explained the importance of care labels, aims of sorting clothes before washing, and the importance of airing and storing clothes after ironing. In part (a), the students understood that care labels include laundry symbols to indicate how a particular item/garment be wash, dry-cleaned or ironed. For example, one student wrote, *Give appropriate information to user on how to care the clothes, helps to know water temperature to be used, direct buyer clothes to buy based on treatment can afford, show type of material used to make the clothes.* Another student wrote, *It provide information on how to treat clothes, tell the user on which material is clothes made from like linen or cotton, help us to know amount of temperature of water required during washing, help us to choose clothes.*

In part (b), the students were aware that sorting clothes allows someone to use different wash cycles such as delicate, normal or special wash and also allows for washing at different temperatures. For example, one student wrote, *Helps the one who wash to apply proper way of cleanliness to a particular type of fabric, help to separate coloured and non coloured clothes, select babies from adult clothes.* Another student wrote, *Helps to identify the clothes which are too dirty so can be soaked, in order to separate white clothes from other colours and to know type of detergents to be used when washing the clothes.* Furthermore, sorting clothes decreases the chance that a garment is going to bleed onto another when you control the cycle type and water temperature.

In part (c), the students understood that airing is important after ironing in order to ensure its perfect dryness and a good gloss as well as to prevent mildew. Likewise, storing clothes after ironing is important, especially storing clean clothes and using proper storage ways, because pests may invade and destroy such clothes. Storing keeps clothes clean and in good look. For example, one student wrote, *Prevent formation of mildew by removing moisture.* Another student wrote, *In order to make the clothes neat and attractive and make it to return its origin if it was faded.* A sample of the correct responses is shown in Extract 5.1

5. One of your colleagues discovered that his cloth is getting worse after each wash, hence he asked for assistance. Before assisting him you discovered that he does not follow the washing instructions. Advise him on:

(a) The importance of care labels during washing of clothes. (Give five points).

- (i) It shows the way of washing the clothes which prevent the damage of the clothes.
- (ii) It help to know the type of water and its temperature to be used when washing the clothes.
- (iii) It help us to know the place of hanging the clothes after washing. Example: On a flat surface or clothes line.
- (iv) It help us to know the clean agent to be used when washing the clothes.
- (v) It help us to know if the clothes is to be washed or dry cleaned.

(b) The aim of sorting before starting washing clothes. (Give three points).

- (i) It help to prevent to damage the colour of other clothes like white clothes.
- (ii) It help to know if the clothes needs mending or removing stains.
- (iii) It help to separate the clothes of different age.

(c) The importance of airing and storing clothes after ironing.

It help to prevent the clothes to catch again dust and store in the place where they will be safe.
prevent clothes from mildew

Extract 5.1: A sample of the correct responses to Question 5

Extract 5.1 shows a sample of the correct responses by a student who gave advice on the importance of care labels during washing clothes, the aim of sorting before washing clothes and the importance of airing and storing clothes after ironing.

In contrast, 65.8 per cent of the students attained weak performance. Among them, 34.8 per cent scored zero. Some of those who got zero

misinterpreted the demand of the question. For example, in part (a), some students provided the importance of laundry instead of the importance of care labels during washing. Others wrote the importance of washing clothes. Some of the incorrect responses were *It kill bacteria that are live in the clothes, it avoid get diseases like skin disease, it makes the clothes it's appearance good, it make the attractive to the some persons who are professional works to look at the society good clothes and attractive.* Another student wrote, *For the attractive of clothes, the clothes it maintain its colour, it give the clothes good appearance, to give the clothes to maintain its attractive, for clothes to maintain its decorative.*

In part (b), the students were not aware that not all clothes consist of the same fabric type or same colourfastness. Thus, sorting clothes is important to avoid potential damage. Some of them explained the aim of soaking clothes before washing. Examples of the incorrect answers were *When you wash the dirt is removed easily, the clothes it be well cleaned, all greases and dirt is removed by sorting, it helps to simplify work when starting washing, it manage the soap, it removal some dirt during sorting the clothes.* Moreover, other students explained the steps in laundry, such as mending, stain removal and washing.

In part (c) the students misunderstood the question's requirements. Hence, they provided incorrect answers. For example, one student wrote, *It help to make clothes usable, it help to make quality of clothes.* Another one wrote, *It remove particles in our clothes, it cause clothes dry and avoid skin diseases.* Yet another one wrote, *It helps to remove the harmful bacteria by using wind.* There were also students who skipped this part. This implies that they were not knowledgeable about the importance of airing and storing clothes after ironing. A sample of the incorrect responses is shown in Extracts 5.2

5. One of your colleagues discovered that his cloth is getting worse after each wash, hence he asked for assistance. Before assisting him you discovered that he does not follow the washing instructions. Advise him on:

(a) The importance of care labels during washing of clothes. (Give five points).

- (i) It can maintain the damage of clothes.
- (ii) It can help to avoid discoloration of clothes.
- (iii) It help to maintain the appearance of clothes.
- (iv) It help to avoid the clothes to torn.
- (v) It prevent the clothes from getting stain and it avoid the spoil of clothes.

(b) The aim of sorting before starting washing clothes. (Give three points).

- (i) It help to know the amount of material which can be used when you washing.
- (ii) It help to know the number of clothes which it should be washed.
- (iii) It help to avoid the discoloration of clothes.

(c) The importance of airing and storing clothes after ironing.

- this it can help to kill harmful germs found to the clothes.

Extract 5.2: A sample of the incorrect responses to question 5

In Extract 5.2, the student provided incorrect responses. For example, in part (a) (iii), the student wrote the importance of washing clothes. In (iv), he/she wrote the importance of mending clothes before washing, and in (v), the student wrote aim of sorting clothes before washing. In part (b) and (c), the responses were not related to the question's requirement.

2.2.4 Question 6: Introduction to Sewing

The question measured the students' knowledge of the functions of sewing machine parts and accessories. The question asked,

Your sister bought a sewing machine. While examining it, she noticed unfamiliar accessories enclosed with it. Provide clarifications to make her familiar with it by:

- (a) Differentiating sewing machine parts and accessories
- (b) Briefly explaining the functions of each of the following sewing machine accessories

- (i) *Zipper foot*
 - (ii) *Hemmer foot*
 - (iii) *Piping foot*
 - (iv) *Binder*
- (c) *Briefly explaining the function of each of the following sewing parts:*
- (i) *Presser foot*
 - (ii) *Presser foot level*
 - (iii) *Feed dog and*
 - (iv) *Hand wheel*

The question was attempted by 5,423 (almost 100%) students who sat for this paper. Two students did not attempt this question. A total of 4,685 students (86.4%) scored from 0 to 2.5 marks. Among them, 3,442 (63.5%) scored zero; 629 (11.6%) scored from 3 to 6 marks; and 109 (2%) scored from 6.5 to 10 marks. Figure 6 is illustrative.

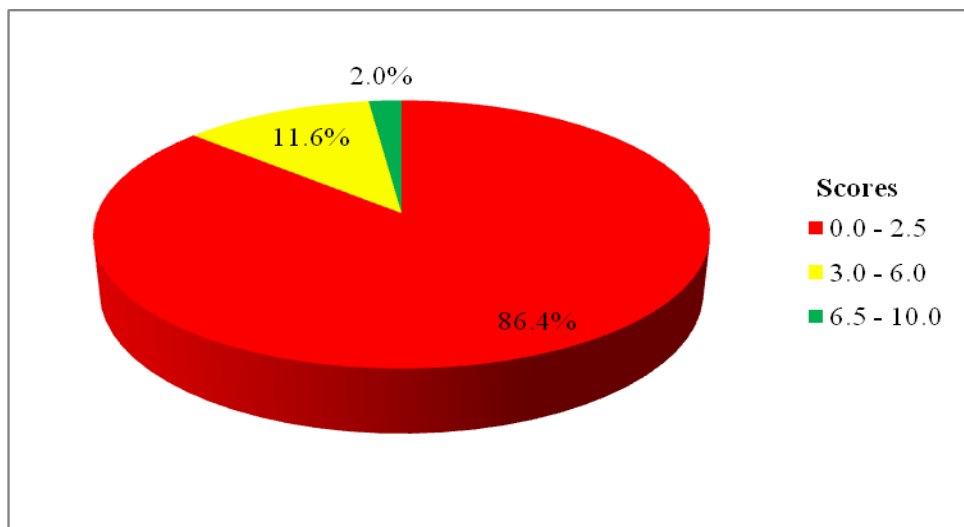


Figure 6: *Students' Performance on Question 6*

Figure 6 shows that the general performance on this question was poor because 86.4 per cent of the students attained weak performance. These students had inadequate knowledge of sewing machine parts and accessories.

Analysis indicates that, among the 86.4 per cent of the students who got low scores, 63.5 per cent scored zero. These students failed to differentiate the sewing machine parts from sewing machine accessories in part (a), for

example, one student wrote, *Sewing machine parts are parts that are used to operate machine while machine accessories are the materials used for attaching the machine*. Another student wrote, *Sewing machine part is the part which bought with machine while machine accessories are manmade parts*. Yet another one wrote, *Sewing machine parts are the parts that are found on the machine while sewing machine accessories are the tools that are used for conducting sewing activities e.g needles and threads*. These answers indicate that the students did not understand and thus failed to differentiate them.

In part (b), their responses show that some of the students were guessing the answers. For example, one student wrote, *Zipper foot is used for holding button during sewing, hemmer foot is used for attaching garments with the buttons, piping foot is used for attaching garments with collars, binder is used to place the garment on the zip together*, which was not correct. Another student wrote, *Zipper foot is used for holding zip and buttons, hemmer foot is used for pressing the garment during sewing, piping foot is used for attaching garments with lace, binder is used to hold two layers of garment*. Others mixed up the function of the sewing machine parts with those of the sewing machine accessories. Some of the incorrect responses were *zipper foot helps to move the fabric, piping foot hold the needle in position and Binder used to start machine to work*. These are the functions of the feed dog, needle clamp and balance wheel respectively.

In part (c), some of the students mixed up the functions of various sewing machine parts. For example, one student wrote, *Presser foot help to move the garments forward when sewing, presser foot level support the presser foot, feed dog rise and fall the presser foot and hand wheel used to roll the thread*. These are the function of the feed dog, presser foot screw, presser foot lever, and bobbin winder, respectively. Others skipped this question, indicating that the students had insufficient knowledge of the tested area. A sample of the incorrect responses is shown in Extract 6.1

6. Your sister bought a sewing machine. While examining it, she noticed unfamiliar accessories enclosed with it. Provide clarifications to make her familiar with it by:

(a) Differentiating sewing machine parts and accessories.

Sewing machine parts; Are those part u
sed for stitching purpose while Accesso
ries Are the ways used for stitching.

(b) Briefly explaining the functions of each of the following sewing machine accessories:

(i) Zipper foot

Used for mark stitching line.

(ii) Hemmer foot

Used for hemming

(iii) Piping foot

Used for protect pieces of material
from piping.

(iv) Binder

Used for hold two pieces of materi
al.

(c) Briefly explaining the function of each of the following sewing machine parts:

(i) Presser foot

Used for seams.

(ii) Presser foot lever

Used for press of the thread.

(iii) Feed dog

Used for feeding.

(iv) Hand wheel

Used for wearing in the hands

Extract 6.1: A sample of the incorrect responses to Question 6

In Extract 6.1 the student failed to provide the correct responses to any of the question. The responses provided indicate inadequate knowledge about the parts and accessories of the sewing machine.

Despite the weak performance on this question, 2 per cent of the students attained good performance. These students correctly differentiated the sewing machine parts and accessories. In part (a), they understood that sewing machine parts are built-in parts that facilitate the machine to work while sewing machine accessories are the parts attached to the sewing machine to simplify a specific task. For example, one student wrote, *Machine parts are parts in the machine which aid in the sewing process*

such as feed dog or presser foot while sewing machine accessories are the machine attachments which are not found in the machine used to perform specific functions. In part (b), the students correctly explained the functions of the sewing machine accessories. For example, one student wrote, *Zipper foot is used to allow stitching over zip in the fabric, hemmer foot is used to applying hemming to avoid fraying of the fabric edges, piping foot used for piping the clothes, and the binder used for binding purposes on the garment.*

Moreover, in part (c) they correctly explained the functions of the given parts of the sewing machine. For example, one student wrote, *Presser foot holds fabric in position when sewing, presser foot lever lowers and raise the presser foot, feed dog control the movement of the fabric under the presser foot, and hand wheel starts and stops the motion of the machine.* Further, the analysis indicates that the students who did not score all the 10 marks allotted to this question provided partially correct answers to the question or provided fewer points than the question's requirement. A sample of the good responses is shown in Extract 6.2

6. Your sister bought a sewing machine. While examining it, she noticed unfamiliar accessories enclosed with it. Provide clarifications to make her familiar with it by:

(a) Differentiating sewing machine parts and accessories.

Sewing machine parts are parts of the machine that are attached to it or necessary to be used in most of sewing activities, while sewing machine accessories are parts of the machine which are only used for a specific or particular purpose for example...

..... hemmer foot and zipper foot:

•

(b) Briefly explaining the functions of each of the following sewing machine accessories:

(i) Zipper foot
 Zipper foot helps or enables the needle to stitch or sew close to the zipper teeth:

(ii) Hemmer foot
 Hemmer foot helps used for making narrow hems on fine materials

(iii) Piping foot
 Piping foot is used for making pipings on garment:

(iv) Binder
 Binder is used for making binds and holds them in one row

(c) Briefly explaining the function of each of the following sewing machine parts:

(i) Presser foot
 Presser foot is used for holding the fabric material in position when being sewn:

(ii) Presser foot lever
 Presser foot lever is used to raise and lower the presser foot:

(iii) Feed dog
 Feed dog is used for pushing or moving the fabric forward when stitching:

(iv) Hand wheel
 Hand wheel is used to raise and lower the needle:

Extract 6.2: A sample of the correct responses to Question 6

Extract 6.2 shows the response by a student who correctly provided the answers. This student demonstrates adequate knowledge of the functions of sewing machine parts and accessories.

2.2.5 Question 7: Cooking Foods

The question measured the students' competence in preventing accidents when cooking food. The question stated,

Your young sister is not familiar with the principles for deep frying as a result, she causes accidents frequently. To avoid accidents, she preferred to use shallow frying. Advice her on:

(a) The safety rules for deep frying. (Give five points)

- (b) *The activities needed to be avoided when fat catches fire. (Give three points)*
- (c) *The procedures for extinguish the fire caused by cooking oil during frying.*

A total of 5,425 students (100%) attempted the question. Among them, 4031 (74.3%) scored from 0 to 2.5 marks; 1,242 (22.9%) scored from 3 to 6 marks; and 152 (2.8%) scored from 6.5 to 10 marks. Figure 7 illustrates this performance.

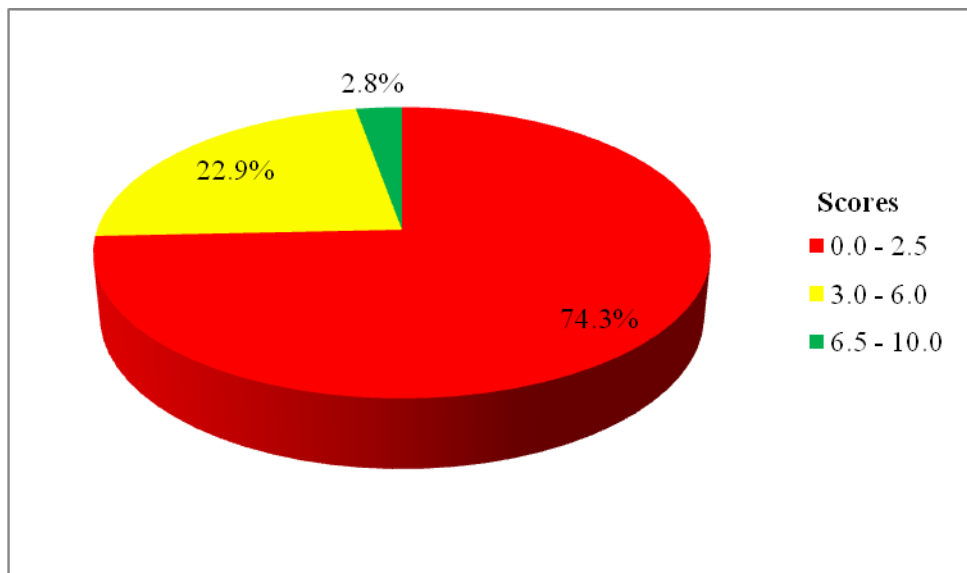


Figure 7: *Students' Performance on Question 7*

Figure 7 shows that the general performance on this question was weak as 74.3 per cent of the students performed below average. This indicated that the students had insufficient knowledge about the topic of cooking foods, specifically about the area of safety in the kitchen.

The students' response analysis shows that 74.3 per cent of the students attained weak performance. Among them, 41.0 per cent scored zero. In part (a), some of these students provided the characteristics of a good kitchen. For example, one student wrote, *Should have source of light, should have a fire extinguisher, should have ventilated area, should have strainer, should have large window, should have first aid kit*, Another wrote, *Avoid too much frying of the food as it may cause overcooking of the food and become dry, wear protective cloth when deep frying, cover the food to be*

fried with other layer, store the hot cooking oil out of contact from the children and aware from strong smell. Others provided rules for frying foods instead of safety rules for deep frying. Examples are *avoid too much heat, coat the food to be fried, cool the oil after cooking, fry the food in the correct amount of oil, dry the food before frying.* These responses are not related to the safety rules for deep-frying.

Likewise, in part (b), the students provided incorrect responses. For example, one student wrote ways of extinguishing fire such as *use dust in order to extinguish fire if there is no fire extinguisher and remove all burning materials that support the fire.* Another one wrote the rules for frying such as *use proper equipment during frying, to use a piece of cloth to hold a hot source pan so as to avoid burning, do not put food which contain water and avoid throwing the food on the fat.* In part (c), the students misinterpreted the question, instead of explaining the procedure for extinguish the fire, they wrote things to avoid when extinguishing fire. For example, one student wrote, *Don't use powder, don't use sand, don't use water.* Others explained what may increase explosion. For example, the student wrote, *Spread the gas through the source of fire.* Others skipped the question. This proves that they had inadequate knowledge about safety in the kitchen. A sample of the incorrect responses is shown in Extract 7.1.

7. Your young sister is not familiar with the principles for deep frying, as a result, she causes accidents frequently. To avoid accidents, she preferred to use shallow frying. Advise her on:

(a) The safety rules for deep frying. (Give five points).

- (i) It improve the flavour of your food.
- (ii) The food looks smart and neat
- (iii) The food having good smell.
- (iv) The food gives you appetite of eating.
- (v) The food will be attractive.

(b) The activities needed to be avoided when fat catches fire. (Give three points).

- (i) We avoid Accident because when oil catch fire we can avoid accident by water or fire extinguisher and also you may running through that accident.
- (ii) We avoid injury you may also get injury and you may cause death because when your self you have catch fire you may get injury or died.
- (iii) We avoid death. yes accident can bring death to your health and when you smoke the st that thing you may get carbon dioxide and you loss it. You may die

(c) The procedure for extinguish the fire caused by cooking oil during frying.

Extinguish the fire caused by cooking oil during frying.

Extract 7.1: A sample of the incorrect responses to Question 7

In Extract 7.1, the student provided reasons for cooking food instead of safety rules for deep-frying in part (a). In part (b), he/she wrote the reasons for preventing accidents, and in part (c), he/she copied the question. Hence, the student attained weak performance.

Despite the weak performance on this question, 152 students (2.8%) scored good marks. Analysis indicates that these students had sufficient knowledge of safety measures during cooking foods. In part (a), they correctly provided safety rules for deep-frying. Some of the correct

responses provided were *avoid splashing water to the hot fat that is used for deep frying, do not through food in the fat that is used for frying instead gently immerse the food in fat, there should be enough fats for frying since in sufficient fats may cause burning of the food, avoid contact with hot oils to avoid scads, after finishing to cook a food slowly use over cloth to remove the frying pan and make the oil cold, avoid the use of too much oil because can come out of frying pan during cooking.* In part (b), the students demonstrated sufficient knowledge about the activities to avoid when fat catches fire. They understood that, when water comes into contacts with fire, the rate of burning increases because water contain oxygen gas, which acts as an oxidizing agent. For example, one student wrote, *Do not pour water on fire, do not touch or hold burning frying pan, pour sand on fire before running.* Another one wrote, *To avoid splashing of water to the hot oil it will catch fire, avoid getting in contact with fire, avoid blowing out the fire because it may lead to spread of the fire.*

In part (c), the students demonstrated adequate knowledge of the procedure for extinguishing fire. They understood that water is not appropriate for extinguishing burning fat. For example, one student wrote, *We should use carbon dioxide extinguisher of a foam powder to turn the fire off.* Another wrote, *Fire caused by cooking oil during frying is extinguished by use dry powder fire extinguisher.* These responses demonstrate their adequate knowledge about safety in the kitchen. A sample of the correct responses is shown in Extract 7.2

7. Your young sister is not familiar with the principles for deep frying, as a result, she causes accidents frequently. To avoid accidents, she preferred to use shallow frying. Advise her on:

(a) The safety rules for deep frying. (Give five points).

- (i) When deep frying, you are not allowed to throw the food into the oil, but place it gently inside the hot oil.
- (ii) When deep frying food, do not put even one drop of other liquids such as water into the hot oil.
- (iii) Do not wait until the oil is too hot for the food to be added as this may cause an accident.
- (iv) During deep frying, do not add too much oil into the pan as this may cause the oil to overflow as it is boiling.
- (v) Do not leave frying foods or only the hot oil unsupervised as it may cause an accident.

(b) The activities needed to be avoided when fat catches fire. (Give three points).

- (i) Do not pour any water on the fire because the water will only make the fire bigger and make a bigger accident.
- (ii) When fat catches fire, do not try to remove the pan from the fire source as you may get badly injured.
- (iii) When fat catches fire, do not try to put out the fire by covering it with a kitchen cloth since it may catch fire and make a bigger accident.

(c) The procedure for extinguish the fire caused by cooking oil during frying.

First, we have to turn off the heat source very carefully in order to not burn ourselves, then we get the suitable fire extinguisher and aim at the fire, then after we pull the pin and let the extinguisher put out the fire.

Extract 7.2: A sample of the correct responses to Question 7

In Extract 7.2 the student correctly addressed all parts of the question, hence scoring high marks. This student demonstrated adequate knowledge about safety in the kitchen.

2.2.6 Question 8: Maternal and Child Health

The question measured the students' knowledge about weaning. The question stated,

Your elder sister has a baby who is approaching the weaning period. Advice her on:

- (a) The problem which the baby is likely to encounter and the causes
(Give four points)*
- (b) How to solve the problem identified in 8 (a) (provide four points)*

The question was attempted by 5,425 (100%) students who sat for this paper. Data analysis shows that 4,828 (89%) students scored from 0 - 2.5 marks; with 2,270 (41.8%) scoring zero. Other 515 (9.5%) scored from 3 to 6 marks; and 82 (1.5%) scored from 6.5 to 10 marks. This performance is summarized in Figure 8

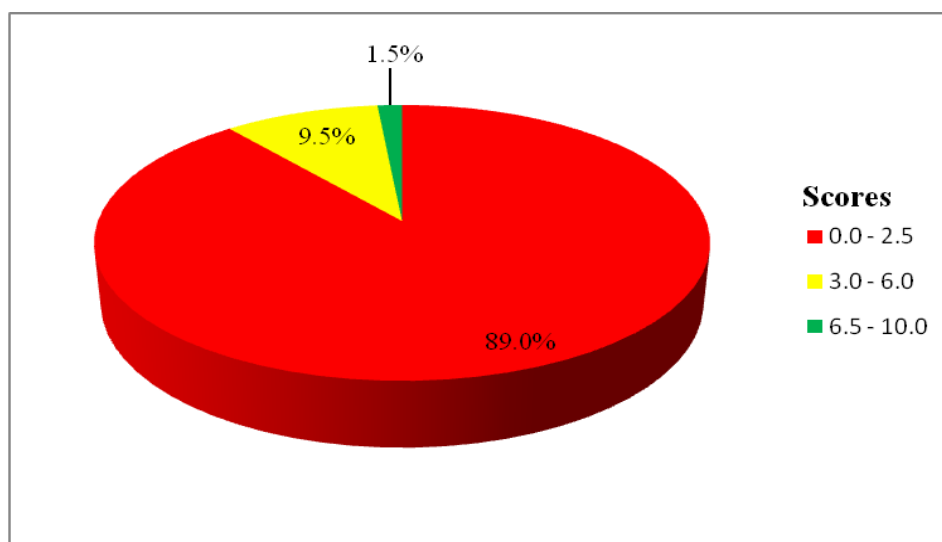


Figure 8.1: Students' Performance on Question 8

Figure 8 shows that the general performance on this question was poor because 89 per cent of the students attained weak performance. These students had insufficient knowledge of weaning. Hence they failed to explain the problems that the baby was likely to encounter, causes and solutions.

In part (a), analysis indicates that the students had insufficient knowledge of weaning problems and their causes, but other students did not understand the question. Hence, they wrote incorrect answers. For example, one student wrote, *The baby can get small fever, the baby can become lonely because has no friends, lack of potential care, a baby grows slowly.* Another student wrote, *The baby can get into problems and can get accident, a baby have a weak digestive system, attention to the child become low, emotional problem to a baby whereby can feel unlike.* Such students did not understand that weaning is the process by which a baby slowly gets used to eating family or adult food and relies less on breast milk. Therefore, the baby is likely to encounter problems such as malnutrition due to overeating or less eating, refusal to eat as the food is new, or diarrhea due to unhygienic food preparation.

In part (b), they failed to explain how to solve the problems that the baby was likely to encounter during weaning. Some of the students provided irrelevant responses. Their responses were, *To provide education to mothers, to avoid from bad behaviors, to teach him/her to respect others by being respecting people or yourself, the mother should pay much attention to the child's movement, The mother should not be lazy to look after the child, the baby should be kept to the place that the mother can see, the baby should be kept far with home or house apparatus, a mother should have a close relationship bond with the baby in order to make the baby feel loved and protected.* Others skipped the question. Extract 8.1 is a sample of the incorrect responses to this question.

8. Your elder sister has a baby who is approaching the weaning period. Advise her on:

(a) The problems which the baby is likely to encounter and the causes. (Give four points).

- (i) The baby is likely to have diseases: for example when a baby is starting to be given the food now and she is too small and your baby likely to suffer from the diseases.
- (ii) Damage of brain and some parts because when your baby is too small and you likely to give her the food of the grown up people you likely your baby to suffer or.
- (iii) The baby will take ^{so long} time to get knowing the food because when you give the baby first day the food and you will get knowing of the food.
- (iv) The baby will take so long to eat him/her self because when the baby you serve for her and she can either eat by him/herself. In order to have the baby to eat her or himself.

(b) How to solve the problems identified in 8 (a). (Provide four points).

- (i) Seek for medical help from the advised or treatment of your children and you in order your baby and your self you been well and health and treatment.
- (ii) You receive the advised from your neighbours who have approaching the weaning period in order can advise you and protect your body and child from the diseases.
- (iii) If you can't see the baby getting well you go and receive the treatment from the hospital and medical advised again when it will stop recover baby.

Extract 8.1: A sample of the incorrect responses to Question 8

Extract 8.1 shows that the student had inadequate knowledge of weaning, hence providing irrelevant responses to both parts. The language used also contains many errors.

In contrast, 82 (1.5%) students attained good performance. In part (a), the students understood that poor hygiene could cause an upset stomach and different infections to a baby during weaning. They also understood that nutritional disorders could be a problem if the baby was over or under fed. In part (b), the students correctly responded by explaining how to solve the problems encountered by the baby during weaning. For example, one student wrote, *Mother should provide adequate and balanced diet, food should be prepared in hygienic condition, breastfeeding should continue during weaning, baby should be given weaning food in little amount.*

Another student wrote, *One supposed to sterilize the tools that used to feed the baby, one has to provide the baby with food that provides all nutrients, one has to use utensils like cups and spoon, use of one type of food for some days to see/observe occurrence of certain reactions in type of food.* These students demonstrated sufficient knowledge about weaning. A sample of the correct responses is shown in Extract 8.2

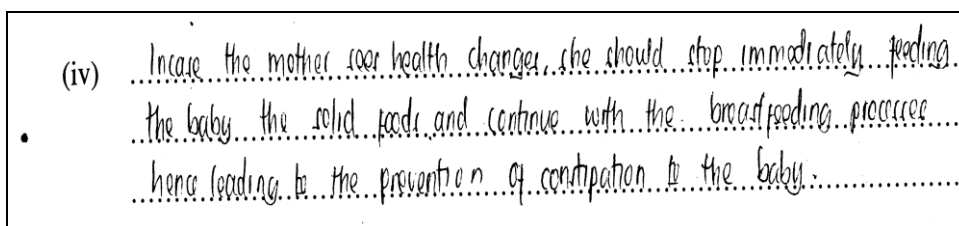
8. Your elder sister has a baby who is approaching the weaning period. Advise her on:

(a) The problems which the baby is likely to encounter and the causes. (Give four points).

- (i) Stomach upset. This is caused due to the baby having eating or eaten the food for the first time so his or her body is not ready to receive the food hence leading to stomach upset in his or her digestive.
- (ii) Malnutrition. Malnutrition is caused due to lack of some nutrients given to the baby during weaning. For example, we are advised to provide all groups of food nutrients to the baby to prevent him from malnutrition.
- (iii) Baby's reduced appetite. This happens most of the times especially when the baby lacks appetite of feeding on or eating anything which may lead to the refusing of the baby to eat the food introduced to her.
- (iv) Decrease of breast milk. When a mother starts to introduce weaning to the baby, the rate of breast milk reduce which may lead to the insufficient amount of food required by the baby to it.

(b) How to solve the problems identified in 8 (a). (Provide four points).

- (i) The baby is supposed to be provided with all groups of nutrients during or when weaning processes are taking place. For example, nutrients like vitamins, carbohydrates, proteins and mineral salts.
- (ii) The baby should be fed with meals which will enable him or her to gain back his or her appetite and eat the foods introduced to him or her during weaning.
- (iii) The mother should give large amount of breast milk to the child and introduce small amounts of food to the baby to enhance the increase or balance the rate of milk which will be present to the mother's breast.



Extract 8.2: A sample of the correct responses to Question 8

Extract 8.2 shows the responses by a student who managed to advise the sister on the problem that the baby was likely to encounter, their causes and solutions. Therefore, the student performed well.

2.2.7 Question 9: Food and Nutrition

This question measured the students' knowledge about the importance of protein. The question stated;

Protein is recommended as a main meal since it is important and needed by everyone to meet daily requirements. Justify this statement by:

- (a) *Explaining the functions of protein. (Provide four points)*
- (b) *Differentiate high biological value protein from low biological value protein*
- (c) *Identify four food sources for each of the following*
 - (i) *High biological value protein*
 - (ii) *Low biological value protein*

The question was attempted by 5,425 (100%) students. Among them, 1,980 (36.5%) scored from 0 to 2.5 marks; 3,076 (56.7%) scored from 3 to 6 marks; and 369 (6.8%) scored from 6.5 to 10 marks. Figure 9 summarizes this performance.

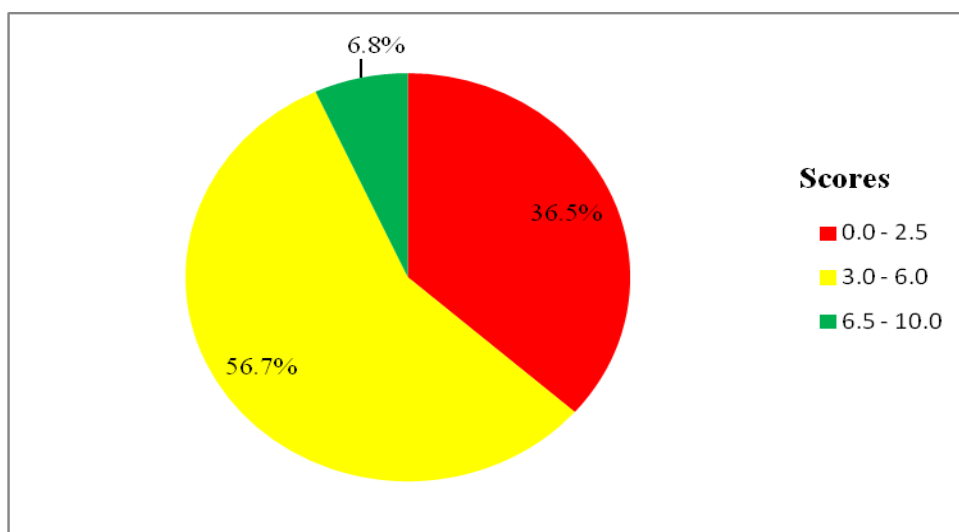


Figure 9: *Students' Performance on Question 9*

Figure 9 shows that the general performance on this question was good since 3,445 (63.5 %) students scored from 3 to 10. This signifies that the students had adequate knowledge of proteins and their functions in the body.

Analysis indicates that the students with good performance were 369 (6.8%). These had adequate knowledge of proteins and their functions. They correctly explained the functions of proteins, differentiated high biological value proteins from low biological value proteins, and identified four sources of high and low biological value proteins.

In part (a), they understood that protein is recommended as the main dish since it maintains growth of the body and repairs body tissues and cells. Proteins can also spare the function of carbohydrates when the diet failed to supply enough energy. Besides, they understood that proteins regulate body processes, provide the body with a structural framework, and maintain proper pH and fluid.

In part (b), the students managed to differentiate high biological value proteins from low biological value proteins. The students understood that high biological value proteins contain all essential amino acids, while low biological value proteins contain some of the essential amino acids. For example, one student wrote, *High biological value proteins are proteins that have all essential amino acids and come from animals such as meat*

while low biological value proteins have less essential amino acids and they comes from plants such as legumes Another student wrote, High biological value proteins is first class proteins with all essential amino acids while low biological value protein is second class proteins and miss one or more essential amino acids.

In part (c), the students correctly provided sources of high and low biological value proteins. Some of correct responses were *high biological value proteins are meat, fish, milk, eggs, chicken and soya. Low biological value proteins are beans, peas, groundnuts, cow peas, lentils and cash nuts*. Extract 9.1 is a sample of the correct responses by a student with good performance.

9. Protein is recommended as a main meal since it is important and needed by everyone to meet daily requirements. Justify this statement by:

(a) Explaining the functions of protein. (Provide four points).

(i) Protein help to repair worn out tissues.....

(ii) Protein acts as a secondary source of energy.....

(iii) Protein helps to build the body of a person.....

(iv) Protein is used to make antibodies that body need.....

(b) Differentiating high biological value protein from low biological value protein.

..... The high biological value protein is the protein that comes.....

..... from the animals while the low biological value protein is.....

..... the protein that its source is plants.....

.....

.....

(c) Identifying four food sources for each of the following:

(i) High biological value protein.

..... Meat.....

..... Fish.....

..... Chicken.....

..... Liver.....

(ii) Low biological value protein.

..... Beans.....

..... Pea.....

..... Chickpea.....

..... Lentils.....

Extract 9.1: A sample of the correct responses to Question 9

Extract 9.1 shows that the student managed to explain the functions of proteins, differences between high biological value proteins and low

biological value proteins and their sources. The student had adequate knowledge about the area tested.

Analysis reveals that 1,980 students (36.5%) scored below average since they failed to provide correct responses. Their responses show that these students did not understand the demands of the question. In part (a), they wrote incorrect responses. For example, one student wrote, *It provide the body, it provide the disease, it enable food, it causes disease the body.* Another student wrote *Carbohydrates, proteins, lipids and minerals* which are nutrients obtained from food.

In part (b), the students also provided incorrect responses. For example, one student wrote, *High biological value proteins are the protein of the values while low biological value is the proteins of no values.* Another student wrote, *High biological value proteins it helps to use extinguish of the high biological value protein while low biological value proteins it help to use extinguish of the low biological value protein.* Yet another student wrote, *High biological value proteins are protein which is needed in a body for large amount while low biological value proteins are the one that are needed for small amount.*

In part (c), the students failed to identify four food sources with high value biological proteins and low value biological proteins. For example, one student wrote, *Sources of high biological value protein are good protein, good carbohydrates, good vitamin and good fat.* Other students failed to express themselves fluently using appropriate words. Hence, they answered the question in Kiswahili. For example, one student wrote *Ugali, wali, viazi maharage* in (i). In (ii) he/she wrote *Fish, meat, rice and maize*. Extract 9.2 illustrates an example of the incorrect responses to the question.

9. Protein is recommended as a main meal since it is important and needed by everyone to meet daily requirements. Justify this statement by:

(a) Explaining the functions of protein. (Provide four points).

(i) It help the health

(ii) It help to living in the body

(iii) It help to in their life

(iv) It help to solve problem in your life

(b) Differentiating high biological value protein from low biological value protein.

High Protein it help in the body and health

While

low protein is the poor health and lack of your balance diet.

(c) Identifying four food sources for each of the following:

(i) High biological value protein.

Living in the body

Living the health

Living the muscle

Good body

(ii) Low biological value protein.

Poor health

Lack of balance diet

Poor immunization

Poor the body

Extract 9.2: A sample of the incorrect responses to Question 9

In Extract 9.2, the student provided irrelevant responses to all parts. This indicates that the student had insufficient knowledge about proteins and their functions.

2.3 Section C: Essay Question

This section consisted of only one essay question composed from the topic of *An Ideal House*. The question had 15 marks.

2.3.1 Question 10: An Ideal House

This question measured the students' competence in cleaning a house. The question was,

A new housemaid in your home has inadequate knowledge about housekeeping; hence she faces difficulties while cleaning a house. Assist her on how to perform cleaning duties by:

(a) *Describing three main schedules of cleaning a house.*

(b) *Explaining four ways of removing dirt on the surface.*

A total of 5,424 (almost 100%) students attempted the question. Only one student did not attempt this question. Data show that 2,788 (51.4%) scored from 0 to 4 marks; with 1,319 (24.3%) scoring zero. In addition, 1,568 (28.9%) scored from 4.5 to 9.5 marks; and 1,068 (19.7%) scored from 10 to 15 marks. This performance is summarized in Figure 10.

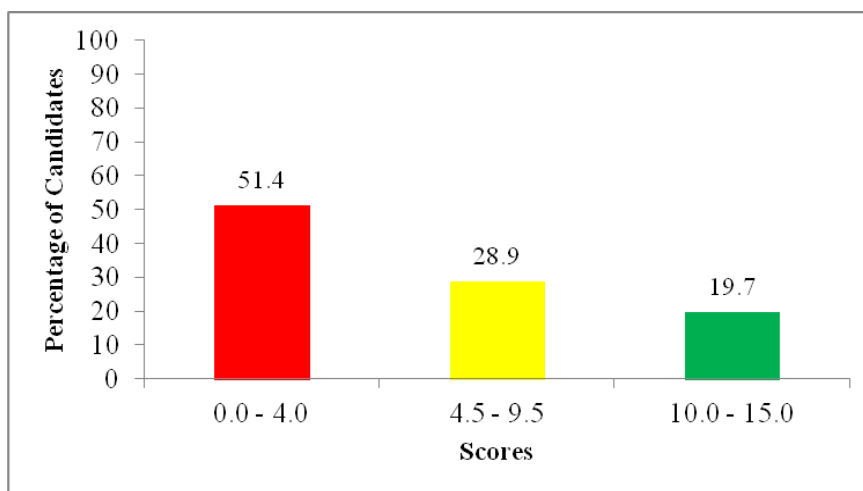


Figure 10: *Students' Performance on Question 10*

Figure 10 shows that the general performance on this question was average since 2,636 students (48.6%) attained average performance. These students had adequate knowledge of cleaning a house.

Analysis indicates that 19.7 per cent of the students attained good performance; 75 (1.4%) of them scored 15 marks. These students described three schedules of cleaning a house. The students understood that certain areas can be cleaned daily, others weekly and some occasionally or once in a year. They also understood that sweeping, dusting, mopping, wiping and scrubbing are the ways of removing dirt on a surface. These students organized their essays logically by providing clear introductions, well explained points in the main body and good conclusions. Extract 10.1 is a sample of the correct responses to the question.

10. Cleaning a house is the process of getting rid of dirties around the surface of the house. The dirties can be organic refuse or non-organic refuse. Organic refuse are refuse that can decay and are from living things while non-organic refuse are refuse that do not decay and are from non-living things. For example: plastic and broken bottles. There are three schedules of cleaning a house.

The following are the main schedules of cleaning a house:

Daily cleaning: This involves cleaning a house daily or everyday. It involves removing loosely dirt. It is mainly conducted around the surface of the house. It involves sweeping the floor and mopping (wet mopping) using a mopper and water for cleaning house. The main of this cleaning is to avoid fixed dirt.

Weekly cleaning: Involves cleaning a house either once or twice a week. It can be done sweeping, dry mopping, wet mopping and scrubbing. It involves removing dirt which are both fixed and loosely dirt. Loosely dirt can be removed by mopping and sweeping while fixed can be removed by scrubbing the dirties.

Occasionally cleaning: This is the type of cleaning which involves cleaning a house either per term or per day in a year. This involves removing of fixed dirties around the surface of the house and areas around the house. Occasionally cleaning can be cutting of long grasses, shaping of flower fence by cutting the leaves and the etc. There are many ways on how

to clean houses and removing dirt around the house's surface.

The following are the four ways of removing dirt on the surface of the house;

Sweeping; Involves using of brooms to remove loosely dirties, for example, fluffy materials and many other loosely dirty. Sweeping can be done inside the house or outside the house. This way it is always done in daily cleaning since it removes loosely dirt.

Mopping; Involves using of a piece of cloth and water. There are many types of mopping which are ^{dry mopping} fixed dirt and wet mopping. Dry mopping involves using of sheepskin to clean the surface while wet mopping involves using a mop and water. This cleaning shines and polishes the surface and it is used to clean and remove both fixed and loosely dirt.

Scrubbing; Is one of the ways of cleaning a house and aids in removing dirt in the surface. It involves using of detergents, water and scrubber or brush. These are used to clean and remove fixed and loosen dirties found on the surface and in removing of fixed dirties. For example, toilets can be scrubbed and other places.

Suction; This involves the using of vacuum cleaner to clean the surface areas. There are some parts in the house do not need mopping or wet mopping. For example, the floor made of woods needs dry mopping, or suction and sweeping. It does not need water since wood can decay when meet with water. So the floor like that needs to be cleaned by suction by vacuum cleaner and other ways.

Therefore, these were the main schedules and the ways on how to remove dirt on a surface. There are other ways on how to get rid of dirties. For example, sweeping, mopping,

dry mopping, wet mopping and others. This aid in providing a house with an attractive area, aids in making the house neat and smart and it also avoids breeding sites of different harmful animals that may cause diseases like cockroaches, snakes, rats and mosquitoes.

Extract 10.1: A sample of the correct responses to Question 10

Extract 10.1 shows the response by a student who managed to describe three main schedules of cleaning a house and four ways of removing dirt on the surface. This implies that the student had adequate knowledge of cleaning a house.

In contrast, analysis shows that 2,788 (51.4%) of the students attained weak performance, with 1,319 (24.3%) scoring zero. Some of the students who scored zero misunderstood the question's requirement. Hence, they provided incorrect responses. For example, instead of describing the main cleaning schedules, some students explained the reasons for cleaning a house. One student wrote, *To protect against diseases, to be with good environment and to remove dirty*. Another one wrote, *It make a house to look attractive, it help a person to get s fresh air and it help a person to avoid diseases*. Likewise, instead of explaining ways of removing dirt from the surface, some explained ways of disposing waste, while others explained ways of maintaining cleanliness such as washing the utensils, cleaning the house well and disposing the waste properly. There were also students who explained ways of making the house compound clean such as *cutting down long grasses, using cleaning tools, and proper waste disposal*. Most of these students also failed to express themselves fluently in English.

Besides, some of the students failed to organize their work in essay form. This indicated that they did not understand that an essay comprises of an introductory part, the main body and the conclusion. Other skipped this question while others provided incorrect answers as they misunderstood the question requirement. This implies that the students had inadequate knowledge of the main schedules of cleaning a house and ways of removing dirt on the surface. Extract 10.2 shows an example of the incorrect responses to the question.

10. A new housemaid in your home has inadequate knowledge about housekeeping; hence she faces difficulties while cleaning a house. Assist her on how to perform cleaning duties by:

- Describing three main schedules of cleaning a house.
- Explaining four ways of removing dirt on the surface.

HOUSE

House! Is the building that people live/building in order to keep family member.

The following are schedules of cleaning a house.

It help to avoid diseases! Because when we clean a house we can avoid diseases like cholera.

It help to avoid bad smell! Because if the house is cleaned there is no any bad smell so it help to avoid bad smell in the house.

It help to look the house attractive. Because if the house is clean and its arranged well we can look our houses attractive and maintainance.

The following are the ways of removing a dirt on the surface.

Sanitation! Because we know that sanitation is the process of keeping environment clean so when we do sanitation we remove dirt on the surface.

By collect all the dirt around the surface! Because maybe when we collect example bottle, piece of papers we can't

move all dirt on the surface.

Proper waste of disposal! Because we know that waste disposal is any unwanted material in the environment but when we use proper waste of disposal we can remove dirt on the surface.

Proper arrange! Because when we see there is maybe chair that are randomly we can arrange and it help to avoid to look the surface unattractive.

Therefore! Cleaning a house is important to our daily life but the is also effect of poor cleaning the house example outbreak of diseases, bad smell, It make the house to look unattractive.

Extract 10.2: A sample of the incorrect responses to Question 10

In Extract 10.2, the student explained the importance of having a clean house instead of describing the three main cleaning schedules. Similarly, instead of explaining ways of removing dirt on a surface, he/she explained

the ways of making a house clean. This student misinterpreted the question's requirement.

3.0 ANALYSIS OF STUDENTS' PERFORMANCE PER TOPIC

The analysis of students' performance on each topic indicates that the students performed well on Questions 1, 3 and 9 which were constructed from *Various Topics* (87.8%), *The Kitchen* (75.5%) and *Food and Nutrition* (63.5%), respectively. The student performance on these topics was contributed by their adequate knowledge of the subject matter, ability to communicate their ideas fluently using appropriate words, and ability to understand the requirements of the questions.

However, the students attained average performance on Questions 4, 5, and 10 which were constructed from the topics of *Sanitation in the House* (57.7%), *An Ideal House* (48.6%) and *Laundry* (34.2%), respectively. The student performance was contributed by their adequate knowledge of the subject content, which made them to provide relevant responses. However, their incomplete or partial answers contributed to average performance.

Furthermore, the students had weak performance on Questions 7, 2, 6 and 8 that were constructed from the topics of *Cooking Food* (25.7%), *The Basic Sewing Stitches* (21.1%), *Introduction to Sewing* (13.6%), and *Maternal and Child Health* (11%), respectively. Analysis shows that the poor performance on these topics was due to the students' insufficient knowledge of the tested area, or due to their misconceptions on the requirements of the questions. Moreover, low English proficiency also hindered them from communicating their ideas fluently. Appendix A summarises the students' performance on each topic.

4.0 CONCLUSION

The analysis that was done on Home Economics FTNA 2021 indicated that the students' performance was average because the majority (44.34%) passed the assessment. The data indicate that 0.2% scored grade A; 1.2% scored grade B; 16.1% scored grade C and 26.8% scored grade D.

The analysis of the students' performance indicates that, out of the ten questions, the students attained good and average performance on six but weak performances on four topics. The good performance was contributed by the students' adequate knowledge of the subject matter and their ability to understand the demands of the questions. The poor performance was due

to insufficient knowledge about the subject content and poor ability to communicate ideas fluently in English.

5.0 RECOMMENDETATIONS

In order to improve students' performance in the future assessments, it is recommended that:

- (a) Since lack of sufficient knowledge about various concepts is one of the reasons for poor performance, teaching and learning techniques should be improved in line with the strategies stipulated in the syllabus. This may help in enhancing the acquisition of Home Economics knowledge in the given topics.
- (b) Teachers and students are advised to read thoroughly the students' Items Response Analysis Report (SIRA). This will enable them to identify possible reasons for the weak performance and take appropriate measures in teaching and learning to improve their performance.
- (c) Since identifying the questions' requirements was a challenge, leading to students' poor performance, teachers should provide enough exercises and tests to enhance students' mastery of assessment techniques. Teachers should advise the students to read questions thoroughly and identify their requirements before attempting them.
- (d) Subject teachers should make sure that all topics are well covered and revised before the students start their assessment.
- (e) Since low English language proficiency contributed to the students' poor performance, students should practise the use of English through writing, speaking and reading to improve the English language skills. Teachers should also put more emphasis on English language teaching.
- (f) Teachers and other education stakeholders should take necessary measures to improve students' performance in this subject.

Appendix A: Summary of Analysis of the Students' Performance on Each Topic 2021

S/N	Topic/sub topic	Type of Question	Question Number	Total Number of Question per Topic	Percentage of Students who scored 30% or above	Remarks
1.	Basic Sewing Stitches, Cooking Foods, Food and Nutrition Introduction to Home Economics, An Ideal House, Introduction to Sewing, the Kitchen, Laundry and Material and Child Health	Multiple choice items	1	9	87.8	Good
2.	The Kitchen	Short answer	3	1	75.5	Good
3.	Food and Nutrition	Short answer	9	1	63.5	Good
4.	Sanitation in the House	Short answer	4	1	57.7	Average
5.	An Ideal House	Essay	10	1	48.6	Average
6.	Laundry	Short answer	5	1	34.2	Average
7.	Cooking Food	Short answer	7	1	25.7	Poor
8.	Basic Sewing Stitches	Matching items	2	1	21.1	Poor
9.	Introduction to Sewing	Short answer	6	1	13.6	Poor
10.	Maternal and Child Health	Short answer	8	1	11	Poor

Appendix B: Students' Performance

