ZANZIBAR EXAMINATIONS COUNCIL

CANDIDATES' ITEMS RESPONSE ANALYSIS REPORT FOR THE FORM THREE ENTRANCE EXAMINATION 2023

234 ICT

Table of Contents

FOREWORD

The Zanzibar Examinations Council is pleased to present this report on Items Response Analysis for the 2023 Form Three Entrance Examination in ICT subject. This report has been prepared in order to provide a feedback to students, teachers, parents, policy makers, curriculum developers and other educational stakeholders about the performance of the candidates in this subject.

Essentially, The Form Three Entrance Examination is the evaluation which intends to measure to what extent the candidates have learnt ICT in their two years of Ordinary Secondary Education. Through examination results, the candidates receive a grade that indicate their level of performance which help to make decisions whether they may continue to another level of education or not.

The report analyzed the achievements of the candidates on various aspects of understanding requirements of questions and the information needed to answer them correctly. Through analysis indicated that the candidates with higher scores earned them due to appropriate responses. Most candidates seem to have poor understanding due to the following reasons: incompetence in using English language skills, inability to differentiate the ICT terms and finally, most of them were unable to elaborate competences of the learned topics.

The detailed analysis displays that, samples from the candidates' scripts to show poor and good responses has been inserted. Finally, various figures with three different colours which reveals how individual question was performed have been attached.

Hence, the feedback and recommendations provided in this report will enable various stakeholders to take appropriate measures to enhance the performance of the future candidates in ICT subject through the National Examinations prepared in Zanzibar.

Finally, Zanzibar Examinations Council would like to express sincere appreciation to the Examination officers, School Inspectors, TC Coordinators, Education Officers, Head teachers, Teachers, One Design Company and all who participated in the completion of this report.

Dr. RASHID A. MUKKI

DIRECTOR
ZANZIBAR EXAMINATIONS COUNCIL
ZANZIBAR

1.0 INTRODUCTION

This report on ICT subject is based on the analysis of the performance of the candidates who sat for the Form Three Entrance Examination in 2023. The analysis of this report is based on the 2010 Syllabus of Tanzania and adhered to 2015 Zanzibar Form Two Examination Format of Zanzibar Examinations Council.

The Form Three Entrance Examination in ICT subject had twelve questions scattered in sections A, B and C. Questions from sections A and B were compulsory. Section A had two questions and section B comprised eight questions. Section C had two question in which candidates were required to opt only one question.

The number of candidates who sat for this examination in December, **2023** were **1,223.** In this analysis, the candidates' scores for each question are interpreted as follows: from 00 to 29 percent is considered as poor, average if the scores range from 30 to 64 percent and good if the candidates' score from 65 to 100 percent.

These performance are shown by using different coloured figure, table and appendix. The colour presented are green colour means good performance, yellow colour means average performance and red colour means for poor performance.

2.0 ANALYSIS OF CANDIDATES' PERFORMANCE

This section presents the questions set for candidates in sections A and B. Also it presents the percentage of candidates who attempted the questions with those who got poor, average and good performance. Finally, the extracts of good and poor responses have been inserted.

2.1 SECTION A:

Section A was made up of TWO questions, multiple choice and matching items question. The marks awarded for a multiple choice question was 10 and that for matching item was 5 to make a total of 15 marks for this section.

2.1.1 Question 1: Multiple choice question

A multiple choice question was made up of 10 items (i to x) and there were four given alternatives from which the candidate had to select the correct alternative.

Different topics which are Computer, Computer network, Word processing and Spreadsheet from the syllabus of Information and Computer Studies for form 1 and Form 2 were used to construct ten items of this question. The candidate was required to choose the correct answers from the four given alternatives named as A, B, C and D.

Item (i): The item asked the candidate to select the correct application of mouse in computing. The given alternatives were

A: Small destructive rodent   B: Device used fortyping

C:Device that controls a pointer on the screen

D:Round plastic container with a tail

Item (ii): The candidate required to identify the two type of processor. The given alternatives were:-

A:RAM and ROM   B: Risc and Cisc

C: Intel and AMD   D:LU and CU

Item (iii): In this item, candidate was required to choose an item which is not dangerous to the computer. The given alternatives were:-

A: WaterB: Smoke   C: Dust   D: Proper ventilation

Item (iv): The item required the candidate to choose the alternative that can be represented by one byte. The alternatives were,

A: One character   B: Eight characters   C:Sentence .... D:Eight Bits

Item (v) wanted the candidate to choose the correct purpose of using power supply unit. The given alternatives were,

A:to convert AC to DC   B:To convert DC to AC

C: To keep AC voltage constant D: To keep DC voltage constant

Item (vi) ,the item required the candidate to choose an alternative which is not a port. The alternatives were,

A: Ps/2   B: USB   C: 1pt   D: Nic

Item (vii) .The item required the candidate to select the language which is understood by computer.

The given alternatives are

   A: Computer understand only C language

   B: Computer understand only Assembly language

   C: Computer understand only binary language

   D: Computer understand only basic language

Item (viii): candidate was asked to choose an alternative tat is used to save changes in a document previously saved.

The alternatives were:

A: Ctrl+v   B:Ctrl+s   C:Ctrl+z   D: Ctrl +b

Item (ix),the item appeared as follow,

"Formula and function in a spread sheet must begin with".

Candidate has to choose the correct answer from the following alternatives,

A: =<=   B: <=   C:=>   D: =

Item(x): Candidate was required to choose the alternatives that represent a brain of a computer. The given alternatives were,

A: Central processing Unit   B: memory

C: Arithmetic and Logic Unit   D:Control Unit

The total marks for this question was 10

The question was attempted by **1,237** which is equal **99.91** percent and **1** candidate which is equal to **0.08** percent did not attempt it. The analysis for the candidate's performance is summarised in the table 1a below.

Table 1a: Analysis of the candidates' performance

PERFORMANCE ANALYSIS						OVERALL PERFORMANCE	
POOR		AVERAGE		GOOD			
0 - 2.5		3 - 6		6.5 - 10			
TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%
125	10.11	955	77.20	157	12.69	1,112	89.89

The analysis of data shows that **77.20** percent of the candidates have average score and this is the major contribution toward good overall performance for this question

There were **125** candidates (which are equal to **10.11** percent) with poor performance as an indication of scarce knowledge on the topics used to construct this question. Extract 1.1 is a sample of poor scoring achieved by one of the candidates.
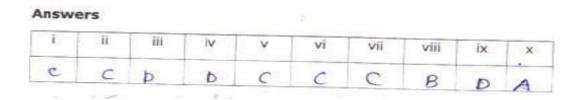
Extract 1.1

Extract 1.1 is a sample of poor responses provided by one of the candidate. The candidate understood what he/she was asked in the question but due to lack of knowledge he/she managed to choose correct alternative in only one item(item x) out of ten given items.

A total of **157** candidates which is equal to **12.60** percent performed well in this question as they managed to score from 6.5 to 10 marks. The candidates reveal the clear understanding of what they were asked and had adequate knowledge on the topics involved in this question. Extract 1.2 show the good responses provided by one of the candidates.

Extract 1.2

Answers

i	ii	iii	iv	v	vi	vii	viii	ix	x
e	C	D	D	C	C	C	B	D	A

Extract 1.2 is a sample of good answers provided by one of the candidates who scored high marks in this question.

The candidate was able to choose correct alternatives in nine (9) items out of ten given items of the question. The alternative in which the candidate choose incorrect alternative was in item five (v).

2.1.2 Question 2: Matching items

In a matching item question, the candidate was given a table consisting of applications of various software on one side and type of software on the other side. The candidate was required to match the application of software with the appropriate type of software.

The question was constructed from the topic "Computer software". It consisted of 5 matching items and the candidate was asked to match the applications of different software in column A with the type of software in column B. Each item in this question carries 01 mark to make a total of 5 marks.

The total number of candidates who attempted the question was **1,236** which is equal to **99.84** percent and while **2** candidates which is equal to **0.16** percent of the registered candidates did not attempt the question. Table 1b demonstrates the summary of analysis of candidate's performance in this question.

Table 1b: Analysis of the candidates' performance

PERFORMANCE ANALYSIS							OVERALL PERFORMANCE	
POOR		AVERAGE		GOOD				
0 - 1		1.5 - 3		3.5 - 5				
TOTAL	%	TOTAL	%	TOTAL	%		TOTAL	%
443	35.84	433	35.03	360	29.13		793	64.16

4

According to the data analysis, **35.03** percent and **29.13** percent of the candidates have an average and good performance respectively. The overall performance for this question is good.

The performance of **443** candidates which is equal to **35.84** percent was poor. Extract 2.1 shows the poor responses extracted from a script of one of the candidate.

Extract 2.1

Answers

i	ii	iii	iv	v
C	D	D	G	1

Extract 2.1 is a typical example of responses extracted from the script of a candidate whose performance is poor in this question. The candidate match correctly in only item (item(iii) and this led him/her to score 1 mark out of five (5) marks allocated for this question.

A total number of candidates with high score were **360** and this is equal to **29.13** percent of the candidates who attempted the question. The sample of good answers given by the candidates is shown by extract 2.2

Extract 2.2

Answers

i	ii	iii	iv	v
1	F	B	E	H

Extract 2.1 shows a sample of responses given by a candidate who scored high marks as he/she managed to match correctly the applications of different software in column A with the respective software column B.

2.2 *SECTION B:*

Section B was made up of eight (8) short answers questions (question number 3 to question number 10) constructed from various topics covered in Information and Computer Studies syllabus for form 1 and form 2. The marks awarded for question number three was five (5) while ten (10) marks was awarded to each of the remaining seven questions to give a total of 75 marks for this section.

2.2.1 Question 3: Computer software

This was a short answer question consisted of two parts (a and b) constructed from the topic of computer software. The question appeared as follow:

a) Briefly explain the term operating system.

b) Identify any two (2) types of operating system. The total marks allotted for this question was 5.

There were **1,223** candidates who attempted the question and this equal to **98.78** percent. The number of candidates who did not attempt the question was **15** which is equal to **1.21** percent. The analysis for the candidate's performance is summarised in the table 2a below.

Table 2a: Analysis of the candidates' performance

PERFORMANCE ANALYSIS						OVERALL PERFORMANCE	
POOR		AVERAGE		GOOD			
0 - 1		1.5 - 3		3.5 - 5			
TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%
796	65.09	233	19.05	194	15.86	427	34.91

The analysis of data in table 2a reveals that about **65.09%** of the candidates scored poorly and **34.91%** of the candidates scored between 1.5 and 5 marks which contribute to the overall performance for this question to be average.

About **796** candidates which equal **65.09%** scored poorly as an indication of insufficient knowledge on what they were asked in a question as it can be seen in extract 3.1

Extract 3.1

Extract 3.1 illustrates the answer provided by a candidate with poor performance in this question. In part (a), the candidate provide information that do not give correct meaning of the termoperating system. In part (b),Instead of identifying the types of operating system,the candidate wrote the words **Hardware** which means a physical part of a computer and **soft ware** which means the instructions given to a computer.

A total of **194** candidates which is equal to **15.86%** performed well in this question as they managed to score from 6.5 to 10 marks. The candidates show the clear understanding of what they were asked and this is evidenced by extract 3.2

Extract 3.2


```
3.   a)   Briefly explain the term operating system.
          Operating system are part of Computer
          system that manages all the hard
          ware and software. Example LINUX,
          UNIX, window, mac (OS) x and
          others.

     b)   . Identify any two (2) types of operating systems.
          i) Batch Operating System.
          ii) Time - Sharing Operating System.
```

Eextract 3.2 is an example of correct answers in this question.

> In part (a), the candidate presents good explanation on the term operating system.

> In part (b), the candidate manage to identify correctly the two types of operating system

2.2.2 Question 4: Computer handling

The topic used to construct the question is computer handling. The question is made up of two parts, a and b.

In part (a), there were items (i) and (ii). Item (i), asked the candidate to explain the importance UPS and voltage Stabilizer.

In part (b), a candidate was required to explain the problems that may occur if a computer power supply is connected to a wrong voltage rating,

The question was attempted by **1,154** candidates which are equivalent to **93.21** percent and **84** candidates (which is **6.78** percent) did not able to attempt the question.

The performance of candidates has been analysed and summarised in table 2b below

Table 2b: Analysis of the candidates' performance

PERFORMANCE ANALYSIS						OVERALL PERFORMANCE	
POOR		AVERAGE		GOOD			
0 - 2.5		3 - 6		6.5 - 10			
TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%
623	53.98	355	30.76	176	15.25	531	46.01

The data analysis in table 2b shows that about **53.98%** of the candidates performed poorly and thus the general performance for this question is **46.01** which is an average.

There were **623** candidates which is equal to **53.98%** who scored from 0 to 2.5 marks as an indication of poor understanding on what they were asked and this is revealed by extract 4.1

Extract 4.1

Extract 4.1 is a sample of responses given by one of the candidates who failed to give the required answers in this question. With reference to the information presented in the extract, a candidate has some ideas on UPS and Voltage stabilizer but he/she do not understand the functions performed by these two devices.

A total of **176** candidates which is equal to **15.25%** scored high marks in this question. The candidates demonstrate clear understanding of what they were asked and this is shown by extract 4.2

Extract 4.2

4. a) Power management should be kept under consideration for an individual or an organization to minimize cost of buying computers and its accessories. As computer technician, explain why do you need the following,

i) UPS

- UPS stands for uninterraptable power supply which is used to supply power to the computer when there is no electricity

ii) Voltage stabilizer

- Voltage stabilizer is used to normalize and control the amount of voltage in the circuit

b) You are advised to ensure that there is correct voltage rating before connecting a computer to the power supply. Briefly explain what can happen if a power supply is connected to a wrong voltage rating?

- The computer will not be working due to low voltage or the fuse will break because the voltage and current passing through the circuit or wire may be too much for it to handle

Extract 4.2 is an example of good responses as extracted from the script of a candidate who performed well in this question.

The candidate explains the purposes of using UPS and voltage stabilizer.

He/She also explained clearly what may happen if a power supply is connected to the wrong voltage rating.

2.2.3 Question 5: Word processing

This question was constructed from the topic of word processing. The question is divided into two parts (a and b). In part (a), the candidate was required to explain the importance of page setup as elated to printing of document and Part (b) required the candidate to explain step by step how to related a document. The total marks for this question was 10.

The question was attempted by **1,181** candidates which is equal to **95.40** percent while **57** candidates (which is **4.60** percent of the candidates) did not attempt the question. Table 2c show the summary for the analysis of candidate's performance in this question.
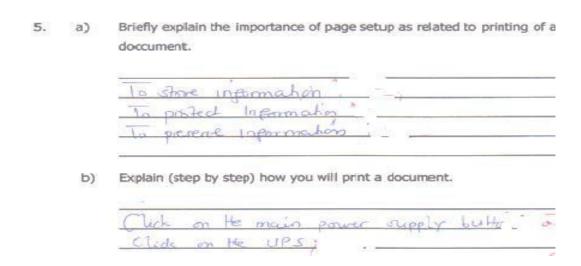
Table 2c Analysis of the candidates' performance

PERFORMANCE ANALYSIS						OVERALL PERFORMANCE	
POOR		AVERAGE		GOOD			
0 - 2.5		3 - 6		6.5 - 10			
TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%
329	27.86	584	49.45	268	27.69	852	72.14

The data analysis in the table 2c indicates that **49.45%** of the candidates had average performance and

27.86 percent had good performance and hence the overall performance for this question is good.

The performance of **329** candidates which is **27.86%** was poor and this is due to poor understanding of candidates on what was demanded by the question. Extract 5.1 is a sample of poor responses from one of the candidates.

Extract 5.1

5. a) Briefly explain the importance of page setup as related to printing of a doccument.

> To store information.
> To protect Information
> To preserve information

b) Explain (step by step) how you will print a document.

> Click on the main power supply button.
> Slide on the UPS;

Extract 5.1 Display the answers presented by a candidate who scored zero mark in this question. The candidate failed to give correct answers in both parts of the question. In part (a) the candidate was not able to explain the importance of page set up as required, he/she wrote sentences related to storage and presentation of information. In part (b), the candidates provide some of the steps to be followed if you want to turn ON the computer instead of steps required to print a document.

There were **268** candidates which is equal to **27.69%** who managed to score high marks in this question. The candidate demonstrates a good understanding on what was required by the question as illustrated by extract 5.2

Extract 5.2

5. a) Briefly explain the importance of page setup as related to printing of a
        doccument.

        _____
        The   page   setup   helps   the   print   to
        make   pages   and   arranging   the
        page
        _____

        _____

    b) Explain (step by step) how you will print a document.

        1) In   the   keyboad   make   the
           document   highlited
        2) then   in   the   key boad   hold   the
           Control   button
        3) make   CTRL + P
        4) Then   it   will   start   printing
        (Note :) Their   must   be   a   printer   connected   to   the computer

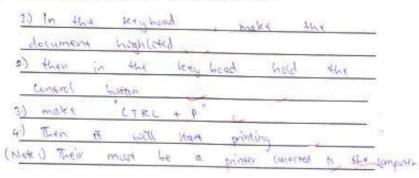In extract 5.2, the candidate correctly explained the importance of page set up as related
to printing of a document. The candidate also explained step by step on how to print a
document.

2.2.4 Question 6: The Internet

This question consisted three parts (a, b and c) constructed from the topics of Internet.
Part (a) is subdivided into two part item (i), item (ii) and item (iii).

In part (a), candidate was asked to write brief explanation on the term electronic mail,
internet and search engine.

In part (b), candidate was asked to explain the uses of internet in business.

Part (c) required the candidates to explain the negative effects of internet on culture.

The question was attempted by **1,222** candidates which is equal to **98.71** percent, the
number and percentage for those who failed to attempt the question was **16** and **1.29**
respectively. The analysis for the candidate's performance is summarised in the table
2d below.

Table 2d: Analysis of the candidates' performance

PERFORMANCE ANALYSIS						OVERALL PERFORMANCE	
POOR		AVERAGE		GOOD			
0 - 2.5		3 - 6		6.5 - 10			
TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%
359	29.39	503	41.16	360	29.45	863	70.61

Table 2d displays a summary of candidates' performance in this question. The data shows that the general performance of candidate is good as **70.61** percent of the candidates managed to score from 3 to 10 marks

About **359** candidates which is equal to **29.39** percent scored from 0 to 2.5 marks as an indication of poor performance. The candidates failed to understand the requirements of the question .Extract 6.1 are an evidence of poor performance in this question

Extract 6.1

6. a) Write short explanation on the following terms,

    i) Electronic mail

        Is ste not poplication
        Softwere and hadewere
        not people man to andr
        Gumwai

    ii) Internet

        Is the presente of prite
        Ar ship of printing or
        document how you iffN

iii) Search engine

> *Are allow processing of able out User program in the main memory at time.*

b) Suppose that you are business man (or woman), use three (3) points to explain how an internet helps you in your business activities.

> i) *All o processing of only one User program in the main memory at a time.*
>
> ii) *Are system designed for use by only one person*
>
> iii) *The program that enables you to perform word processing functions*

c) Use two (2) points to explain how internet may negatively affect our culture.

> a) *Device that controls a pointer on the screen.*

Extract 6.1 is a sample of answers from a candidate who gives wrong answers.

Due to poor English language and writing skills of the candidate, it is difficult to understand the answers given by a candidate.

The number of candidates who performed well in this question is **360** which is equal to **29.45** percent. The candidates understood the requirements of the question and were able to provide correct answers illustrated by extract 6.2

Extract 6.2

iii) Search engine

> *Search engine is a name that given enables you to search web page. in a computer network in*

b) Suppose that you are business man (or woman), use three (3) points to explain how an internet helps you in your business activities.

(i) Advertizing of products, I will introduce my bussiness online inorder to get many viewers

(ii) Purchasing product ; It used to purchase an item like clothes .

(iii) Search for information ; Information about my work

c) Use two (2) points to explain how internet may negatively affect our culture.

(i) By looking ex pictures ; Internet enable user to search for different information that person need to get it

(ii) To engage in terrorism and drug tracking ; People on internet have many groups eg. bad groups

Extract 6.2 demonstrate the sample of good candidate's responses. The candidate was able to give correct explanation on the terms- electronic mail, internet and search engine. In part (b), the candidate managed to give explanation on how the internet is useful in daily business activities. The candidate also was able to explain the negative effects of internet on the culture of a particular society.

2.2.5 Question 7: Computer software

The question had three parts (a, b and c) which are constructed from the topic of computer software found in form 1 and form 2 computer syllabus. Part (a) required the candidate to give the difference between system software and application software. In part (b) the candidate was asked to write the functions of operating system. In part (c), the candidate was required to identify four types of operating system.

There were **1,218** candidates who attempted the question; this is equal to **98.34** percent of the registered candidates. A total of **20** candidates which is about **1.62** percent did not attempt the question. The performance analysis for the question is shown in table 2e below

Table 2e: Analysis of the candidates' performance

PERFORMANCE ANALYSIS						OVERALL PERFORMANCE	
POOR		AVERAGE		GOOD			
0 - 2.5		3 - 6		6.5 - 10			
TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%
746	61.25	377	30.96	95	7.79	472	38.75

The performance analysis demonstrates that about **38.75** percent of the candidates had average performance, **7.79** percent had good performance and this contributes to the average overall performance in this question.

The analysis also shows that **746** candidates which are equal to **61.25** percent had poor performance in this question. The candidate did not understand the requirements of the question as can be seen in extract 7.1

Extract 7.1

Extract 7.1 is a sample of poor responses as extracted from a script of a candidate. The candidate did not able to give correct differences between system software and application software.

The candidate explained that the system software perform the functions which are performed by application software which is not correct.

In (b), He/she state the functions of monitor and storage devices instead of the functions of operating system. In part (a) He/she also failed to write the functions of operating system in part (b). The candidate managed to identify only one (1) type of operating system in part (c) of the question.
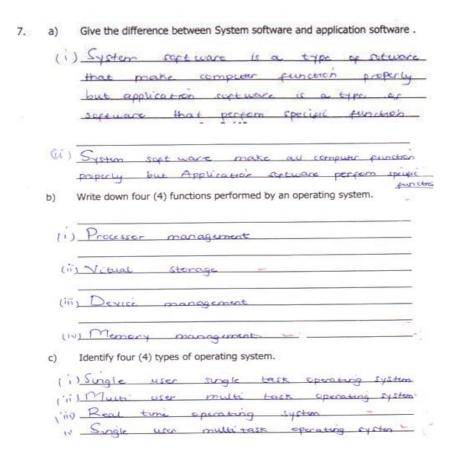
Only **95** candidates which is equal to **7.79** percent performed well and managed to score high marks in this question. The candidates show the clear understanding of what they were asked as it can be observed in extract 7.2

Extract 7.2

7. a) Give the difference between System software and application software .

(i) System software is a type of software that make computer function properly but application software is a type of software that perform special function

(ii) System software make all computer function properly but Application software perform specific function

b) Write down four (4) functions performed by an operating system.

(i) Processor management

(ii) Virtual storage

(iii) Device management

(iv) Memory management

c) Identify four (4) types of operating system.

(i) Single user single task operating system
(ii) Multi user multi task operating system
(iii) Real time operating system
iv Single user multi task operating system

Extract 7.2 is an example correct answer provided by one of the candidates. The differences between system software and application software have been well presented by a candidate. The candidate managed to write correctly the functions performed by operating System. The types of operating systems are well identified by a candidate.

2.2.6 Question 8: The computer

The question consisted of two parts (a and b) constructed from the topic "the computer".

In part (a),candidate was asked to write short explanation on the term Central processing Unit(CPU) while in part (b) the candidate was required to make analysis on the two functions performed by each part of a CPU.

The question was attempted by **1,191** candidates which is equal to **96.20** percent while **47** candidates (which are **3.80** percent) did not attempt the question. Table 2f shows the summary for the analysis of candidate's performance in this question.

Table 2f Analysis of the candidates' performance

PERFORMANCE ANALYSIS						OVERALL PERFORMANCE	
POOR		AVERAGE		GOOD			
0 - 2.5		3 - 6		6.5 - 10			
TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%
187	32.49	500	41.98	304	25.52	804	67.51

The data analysis in table 2f shows that **41.98** percent of the candidates obtained average score and **25.52**
percent had good score and the general performance for this question is good

Also, the data analysis has identified **187** candidates which are equal to **32.49** percent who performed poorly. Extract 5.1 is a sample of poor responses from one of the candidates.

Extract 8.1

8.   a)   Write short explanation on the term Central Processing Unit (CPU).

Central proccesing unit (CPU) : Is the process of store
Is a item that used to store data and information for
a long time.

b)   Arithmetic and Logic Unit, Control Unit and Memory (or Storage) Unit are three main parts of CPU. Analyse two (2) functions performed by

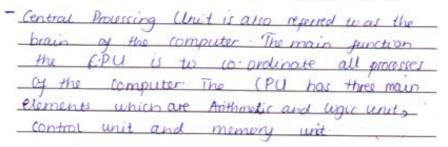Extract 8.1 shows the sample of poor candidate's responses. The candidate provided incorrect answers in both parts of the question. For example, the candidate explains that CPU is used to store data and information which is not correct. Data and information are stored by using storage devices and not CPU

About **304** candidates which is equal to **25.52** percent scored between 6 and 10 marks as an indication of good performance .Extract 8.2 displays good responses from one of the candidates.

Extract 8.2

8. a) Write short explanation on the term Central Processing Unit (CPU).

> Central Processing Unit is also referred to as the brain of the computer. The main function the CPU is to co-ordinate all processes of the computer. The CPU has three main elements which are Arithmetic and logic unit, Control unit and memory unit.

b) Arithmetic and Logic Unit, Control Unit and Memory (or Storage) Unit are three main parts of CPU. Analyse two (2) functions performed by each part of the CPU.

> • Arithmetic and Logic Unit:
> i) Performs arithmetic and logical functions
> ii) Returns a value to an expression
> • Control unit
> i) Coordinating all the processing activities of the CPU
> ii) Controlling the CPU and coordination with othe units of the CPU.
> • Memory unit
> i) Is used to store data or file temporarily
> ii) Holding data and instruction while the CPU works with them

18

Extract 8.2 demonstrate the sample of good candidate's responses. The candidate was able to give short explanation on the term Central processing Unit. The functions performed by each part of CPU have been well analysed by the candidate as shown in the extract.

2.2.7 Question 9: Computer evolution
The question is constructed from the topic "Computer evolution". It consists of two parts (a and b).Part (a) of the question required the candidate to give the differences between calculator and computer and part (b) asked the candidate to identify characteristics of the first generation of computers.

The question was attempted by **1,204** candidates who are equal to **97.25** percent; the number of candidates who failed to attempt the question was **34** which is equal to **2.75** percent of the total number of registered candidates. The analysis for the candidate's performance is summarised in the table 2g.

Table 2g: Analysis of the candidates' performance.

PERFORMANCE ANALYSIS						OVERALL PERFORMANCE	
POOR		AVERAGE		GOOD			
0 - 2.5		3 - 6		6.5 - 10			
TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%
309	25.66	460	38.21	435	36.13	896	74.34

Table 2g displays a summary of candidates 'performance in this question. The data analysis shows that the **38.21** percent of the candidates had average score and **36.13** percent had good score and hence the general performance for this question is good.

On the other hand, the analysis reveals that **309** candidates which is equal to **25.66** percent performed poorly in this question as indicated by extract 9.1

9. a) Computers and calculators are widely used in everyday life. Give three (3) differences between calculator and a computer.

> Calculato It used to simplify works.
> Computer it used to simplify hard work example notes.
> Compute it used to saving data. e.

b) Every computer generation is associated with specific characteristics. Identify four (4) main characteristics of the first generation of computers.

> The first generation of computers is very simplify file of in the computer network.

Extract 9.1 is a good example of responses extracted from the script of a candidate with poor score. The candidate failed to give the difference between computer and calculator. The candidate also failed to identify the characteristics of first generation of computer.

There were **435** candidates which is equal to **36.13** percent scored between 6.5 and 10 marks as an indication of good performance. Extract 9.2 display good responses as extracted from the script of one of the candidates.

Extract 9.2

9. a) Computers and calculators are widely used in everyday life. Give three (3) differences between calculator and a computer.

> i) A calculator is a special purpose computer while a computer is a multi-purpose computer
>
> ii) A calculator does not allow the installation of application programs while a computer allows the installation of application softwares
>
> iii) A calculator cannot be connected to the internet but a computer can be connected to the internet.

b) Every computer generation is associated with specific characteristics. Identify four (4) main characteristics of the first generation of computers.

> i) They emmitted a lot of heat
> ii) They were very large in size
> iii) They had a very small memory (storage) capacity
> iv) They were very slow in terms of processing speed

Extract 9.2 is a typical example of good candidate's responses.
The candidate was able to give the differences between calculator and computer.
In part (b), the candidate managed to identify the main characteristics of the first generation of computers.

1.1.8 Question 10: Information

This question consisted of three parts (a, b and c) constructed from the topic "**Information**"

The question appeared as follow:

a) Convert the following
    i)   3GB to KB   ii) 8MB to Bytes

b) Explain the importance of information to the society

c) Give four differences between traditional ways and modern ways of disseminat ing information The total marks for this question was 10**.**

The question was attempted by **1,203** candidates which is equal to **97.17** percent and **35** candidates which is **2.83** percent of the total number of candidates did not answer the question. The analysis for the candidate's performance is summarised in the table 2h below.

Table 2h: Analysis of the candidates' performance

PERFORMANCE ANALYSIS						OVERALL PERFORMANCE	
POOR		AVERAGE		GOOD			
0 - 2.5		3 - 6		6.5 - 10			
TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%
210	17.46	503	41.81	490	40.73	993	82.54

Table 2h illustrates the candidates' performance in this question. The data analysis shows that 41.81 percent of the candidates had average score and 40.73 percent of the candidates had good score, therefore the general performance in this question is good

Also, the analysis shows that there are 210 candidates which is equal to 17.46 percent who scored from 0 to 2.5 marks as an indication of poor performance. The candidates failed to understand the requirements of the question. Extract 10.1 exhibits a sample the poor performance in this question.

Extract 10.1

a) Convert the following
   i) 3GB in to KB

   3GB into kB
   _GB_
   _= 3kB_

   ii) 8 MB in to Bytes

   _8 MB_
   _MB_
   = 8bytes.

b) Explain the importance of information to a society (Use two (2) points).

   i) Creating education. It is used for creating education in the people of the society.
   ii) increase transport. It is used for increase the transport of the society to give information of transport.

c) Give four (4) differences between traditional ways and modern ways of disseminating information.

   i) Traditional is the process of traditional in a computer while modern way is the process of modern in a computer.
   ii) Traditional way are compact keybord, mouse, moniter while modern way are compact phone, tablet, ipad.
   iii) Traditional it is used of computer room while modern way it is used for society.
   iv) Traditional way are compout information of the phone while modern are compout information of magazine

Extract 10.1 exhibits wrong answers given by a candidate who scored low marks (0 to 2.5 marks). The candidate failed to to make conversion of units in part (a) of the question. Not only that, he/she also failed to explain the importance of information to the society and the differences between traditional ways and modern ways of disseminating information.

In part (a) the candidate did not able to perform conversion of units and he/she wrote 3KB and 8bytes which are equal to 3GB and 8MB respectively

The candidate state that, traditional ways use computer and phone. These devices are used in modern ways of disseminating information and not in traditional ways

About 490 candidates which are equal to 40.73 percent had good score as they understood the requirements of the question that led them to obtain high score. Extract 10.2 is a sample of good responses given by one of the candidates.

Extract 10.2

10. a) Convert the following

i) 3GB in to KB

$$b = 3,000,000,000 \text{ bytes}$$
$$1 \text{ KB} = 1,000 \text{ bytes}$$
$$x = 3,000,000,000 \text{ bytes}$$

1 byte = 1GB = 1,000,000,000 bytes

$$3GB = x$$

$$x = 3GB \times 1,000,000,000 \text{ bytes} \over 1 GB$$

$$x = 1 \times 3,000,000,000 \over 1000$$

$$x = 3,000,000 \text{ KB}$$

$$\therefore 3GB = 3,000,000 \text{ KB}$$

ii) 8 MB in to Bytes

$$1MB = 1,000,000 \text{ bytes}$$
$$8MB = x$$

$$x = 8MB \times 1,000,000 \text{ bytes} \over 1 MB$$

$$x = 8,000,000 \text{ bytes}$$

$$\therefore 8MB = 8,000,000 \text{ bytes}$$

b) Explain the importance of information to a society (Use two (2) points).

i.) Creates awareness: Different information displayed in different areas too is used to give awareness about a curtain disease or anything

ii) Gaining new knowledge: Information also provide new knowledge to the society by displaying it

c) Give four (4) differences between traditional ways and modern ways of disseminating information.

i.) The traditional method of disseminating information is very low but the modern ways of disseminating information are fast.

ii.) The traditional method of disseminating information reaches a small number of people (Not everyone gets the information but the modern ways of disseminating information reaches a large group or number of people.

iii.) The traditional method of disseminating information contains few and basic information while the modern ways contain a lot of informations.

iv.) The traditional ways of disseminating information involves materials such as drums, whistle and horns but the modern ways of disseminating involves materials such as radios, televisions and others.

In Extract 10.2 the good responses provided by one of the candidates have been shown. The candidate was able to do correct conversion of units. The importance of information have been well explained by the candidate. The candidate reveals his/her strong ability in providing differences between traditional ways and modern ways of disseminating information.

2.3   SECTION C

Section C was made up of TWO (2) long answers questions (question 11 and question 12) constructed from two different topics (**The computer** and **Spreadsheet)** found in Information and Computer Studies syllabus for form 1 and form 2. The candidate was required to choose only one (1) question. The marks awarded for this section was 10 from each question.

2.3.1 Question 11: The Computer

The question was made up of three parts named as a, b and c.

In part (a), the candidate was asked to explain the term primary memory.

Part (b) of the question required the candidate to state the main function of RAM and in part (c), the candidate asked to show the differences between RAM and ROM.

The total number of candidates who attempted the question was **562** which is equal to **45.40** percent while

676 candidates (equal to **54.60** percent) did not attempt the question.

Table 3a: Analysis of the candidates' performance

PERFORMANCE ANALYSIS						OVERALL PERFORMANCE	
POOR		AVERAGE		GOOD			
0 - 2.5		3 - 6		6.5 - 10			
TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%
344	61.22	138	24.55	80	14.23	218	38.78

The overall performance in this question is average as only **38.78** percent of candidates managed to score between 3 and 10 marks.

The data analysis summarised in the table 3a shows that **61.22** percent of the candidates performed poorly and their marks range between 0 and 2.5 and this is an indication of lack of adequate knowledge on the topic tested in this question.

Extract 11.1 shows the poor responses as extracted from one of the candidates

11. a) Briefly explain the term primary memory.

Primary memory are the ~~type~~ memory of the document
is the small and very importance of the computer.

b) State the main function of a RAM.

I) It is used par. Very cheap in Vtnew data.

ii) It is used for fast in the computer.

c) Show three (3) differences between RAM and ROM.

i) RAM are the Radom accessing memory which Rom
Read only memory.
ii) RAM is used for Computer hardware while
Rom is used for Computer software.
iii) Ram It is float in the Computer while
Rom it is lost in the computer

Extract 11.1 displays the sample of poor answers provided by one of the candidates. The sentence written in (a) is not clear and do not provide the meaning of primary memory. The candidate failed to how clear differences between RAM and ROM even though he/she wrote the long form of RAM and ROM.

The analysis also found that **80** candidates which is equal to **14.23** percent performed well in this question. Extract 11.2 is sample of good answers provided by one of the candidates.

Extract 11.2

11. a) Briefly explain the term primary memory.

Primary memory is the memory that is directly accesible by the C.PU. This memory is used to store data or files temporarily.

b) State the main function of a RAM.

- The main function of a R.A.M is to hold data and instructions temporarily as the CPU works with them

c) Show three (3) differences between RAM and ROM.

i) The RAM is volatile which means that its content gets lost when the computer is switched off but the ROM is non-volatile.
ii) The RAM can be read, changed and copied but ROM can not be read, changed and copied.
iii) The RAM is used to hold data or instructions while the CPU works with them but ROM is a firmware used to store data or instruction permanently.

Extract 11.2 is an example of correct answers provided by one of the candidates. In part (a), the candidate presents good explanation on the term primary memory. In part (b), the candidate manages to state the main function of a RAM. In part (c), the candidate was able to show the differences between RAM and ROM

2.3.2 Question 12: Spread sheet

This is a long answer type question and had two parts (a and b). In part (a), the candidate was re required to explain the term cell as used in spread sheet. The candidate also was asked to give the meaning of letter D and number 5 in a cell named as D5

In part (b), the candidates was a given a table filled with various data and asked to give the answers related to the data in a given table . The question basically tested the understanding of candidate on Excel program. Table 3b is a summary for the analysis of candidate's performance in this question.

The total number of candidates who attempted the question was **562** which is equal to **51.86** percent while **596** candidates (equal to **48.14** percent) did not attempt the question.

Table 3b: Analysis of the candidates' performance

PERFORMANCE ANALYSIS						OVERALL PERFORMANCE	
POOR		AVERAGE		GOOD			
0 - 2.5		3 - 6		6.5 - 10			
TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%
251	39.10	160	24.92	231	35.98	391	60.90

The data analysis shows that **35.98** percent of the candidates performed well as they scored between 6.5 and 10 marks and this contributes to the availability of average overall performance in this question.

Also, analysis shows that **39.10** percent of the candidates performed poorly. Extract 12.1 is a sample of poor responses for this question.

Extract 12.1

a) i) Write brief explanation on the term cell.

cell is th smoll arre an that
stvre charge in the circut

ii) If one of the cell on a spreadsheet is named as **D5**,

The letter D represents ...Distance...

Number 5 represents ...fiue...

b) Study the spreadsheet table below and then answer the questions that follow.

	A	B	C	D	E	F	G
S/N	REG. NUMBER	NAME OF STUDENT	ARABIC	MATH	ENGL	TOTAL	AVERAGE
3	001	SULEIMN JAFFAR	34	45	32	III	VII
4	002	AZZA MGUBI	30	34	38	IDZ	VIII
5	003	JULIUS JAMES	56	39	54	149	IV
6	004	FATMA SAAD	66	12	67	145	V
7	005	JAMILA NOUR	34	23	23	80	IX
8	006	ZULFIYA MSELWA	44	65	34	143	VI
9	007	MANDOLWA MAIKO	89	78	45	ZIZ	I
10	008	RUBEN MSHEBA	80	65	65	Z10	II
11	009	SOPHIA NDALA	25	98	76	199	III

Write a formula

i)   That will help you to find the average scored by SULEIMAN JAFFAR

ii) To be used if you want to calculate the sum of marks obtained by JAMILA NOUR

Iii) That will help you to determine the minimum marks on English subject.

(i) The average of SULEIMAN JAFFAR is seven (vii)

(ii) All marks of JAMILA NOUR is eighty (80)

(iii) All marks of english subject if you

Extract 12.1 show the responses from one of the candidates with poor scoring. Answers in all parts of the question were not correct. In part (a), the candidate wrote a definition of cell in relation to electric circuit instead of spreadsheet. In part (b), the candidate failed to write all required formulae.

There were **231** candidates which is equal to **35.98** percent who understood the requirements of the question and also had satisfactory knowledge that enabled them to provide good responses as shown by the extract 12.2

Extract 12.2

12. a] i) Write brief explanation on the term cell.

Cell is the intersection of row and columns in the spread sheet program.

ii) If one of the cell on a spreadsheet is named as **D5**,

The letter D represents ......Columns......

Number 5 represents ....Rows......

b)   Study the spreadsheet table below and then answer the questions that follow.

S/N	A REG. NUMBER	B NAME OF STUDENT	C ARABIC	D MATH	E ENGL	F TOTAL	G AVERAGE
3	001	SULEIMN JAFFAR	34	45	32		
4	002	AZZA MGUBI	30	34	38		
5	003	JULIUS JAMES	56	39	54		
6	004	FATMA SAAD	66	12	67		
7	005	JAMILA NOUR	34	23	23		
8	006	ZULFIYA MSELWA	44	65	34		
9	007	MANDOLWA MAIKO	89	78	45		
10	008	RUBEN MSHEBA	80	65	65		
11	009	SOPHIA NDALA	25	98	76		

Write a formula

i)   That will help you to find the average scored by SULEIMAN JAFFAR

ii)   To be used if you want to calculate the sum of marks obtained by JAMILA NOUR

iii) That will help you to determine the minimum marks on English subject.

Solution

i) Average of Suleiman Jaffar
= (C3 + D3 + E3)/3

ii) The sum of Jamila Nour marks.
= C7 + D7 + E7

iii) Minimum marks on English subject
= MIN(E3 : E11)

Extract 12.2 exhibits the sample of good candidate's responses. The candidate was able to give brief explanation on the term cell and correctly state the meaning of letter **D** and number **5.** All required formulae in part(c) have been written correctly by the candidate.

3.0   CONCLUSION

The analysis of the candidates' performance shows that there are six questions which were well performed and the same number of questions had average performance and there is no questions had poor performance.

In comparison to the 2022 Form two examinations results, the candidates' performance in 2023 has been improved. The improvement in candidates' performance may be due to the good coverage in majority of topics in the syllabus for form 1 and form 2. The other reason for the improvement in the performance of candidates is the increased number of ICT teachers especial in some of the government and private schools. Availability of computer laboratories in some schools especially the privately owned schools is another reason for the improved overall performance in 2023.

It is expected that the recommendations given in this report will enable school head teachers (particularly majority of the government schools), school managers, teachers and other education stake holders to take immediate and appropriate measures to improve the performance of candidates in Information and computer studies subject for the next coming years.

4.0   RECOMMENDATIONS

Based on data analysis conducted on examination results, conclusion made for the performance in Information and computer studies examination for the 2023, the following are the recommendations;

i.   The number qualified ICT teachers especially in government schools should be increased.

ii. The computer laboratories should be well equipped to enable the students to be familiar with computer practical activities.

iii. Teachers should guide the students on frequent revision of all form one and form two topics in the syllabus

iv. Teachers should spare time to enable students to learn basic concepts involved in the subject.

v.   The head teachers and school managers have to make sure that the syllabus for form 1 and form 2 is covered with in a specific period of the year.

APPENDICES

APPENDIX 1

SUMMARY OF CANDIDATES' PERFORMANCE PER QUESTION AND TOPIC WISE IN INFORMATION AND COMPUTER STUDIES SUBJECT 2023

S/N:	TOPIC	QUESTION NUMBER	PERCENTAGES OF CANDIDATES PER QUESTION	REMARK
1	Computer, computer network, Word-processing spreadsheet	1	89.89	GOOD
2	Computer evolution	10	82.54	GOOD
3	Computer networks and communication	9	74.34	GOOD
4	Computer networks and Communicationssification	5	72.14	GOOD
5	The internet	6	70.61	GOOD
6	Computer software and Computer handling	8	67.51	GOOD
7	Computer software	2	64.16	AVERAGE
8	The computer	12	60.90	AVERAGE
9	Computer handling.	4	46.01	AVERAGE
10	Spreadsheet	11	38.78	AVERAGE
11	Word Processing.	7	38.75	AVERAGE
12	Computer software	3	34.91	AVERAGE

APPENDIX II

SUMMARY OF CANDIDATES' PERFORMANCE PER QUESTION AND TOPIC WISE IN INFORMATION AND COMPUTER STUDIES SUBJECT 2022

S/N:	TOPIC	QUESTION NUMBER	PERCENTAGES OF CANDIDATES PER QUESTION	REMARK
1	Internet	5	76.85	GOOD
2	Computer networks and communication	11	76.00	GOOD
3	Concept of information,the computer,Spredsheet, the internet,word processing, computer handling	1	61.88	AVERAGE
4	The Computer	8	60.59	AVERAGE
5	Computer networks and Communicationssification	2	57.84	AVERAGE
6	The internet	9	52.62	AVERAGE
7	Word Processing.	6	49.79	AVERAGE
8	Computer software and Computer handling	3	48.13	AVERAGE
9	Computer networks and communication	10	44.93	AVERAGE
10	Computer evolution	7	23.40	POOR
11	Spreadsheet	4	22.83	POOR
12	The computer	12	19.59	POOR