



*Let the mind manage the body
Que l'esprit gère le corps*

**MAURITIUS
EXAMINATIONS
SYNDICATE**

**NCE 2021-2022 GRADE 9
INFORMATION & COMMUNICATIONS
TECHNOLOGY (ICT)**

Subject code: N540

Examiners' Report

July 2023

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INTRODUCTION

The 2021-2022 National Certificate of Education (NCE) Assessment for Information and Communications Technology (ICT) was based on the Expected Learning Outcomes stated in the National Curriculum Framework (NCF) Grade 7, 8 & 9 and detailed in the ICT-Teaching and Learning Syllabus (2017) Grades 7, 8 & 9.

Candidates are assessed according to three Assessment Objectives (AOs), namely:

- AO1 - Knowledge & Comprehension
- AO2 - Application
- AO3 - Analysis

Table 1 gives a breakdown of the weighting allocated to each of the assessment objectives.

Learning Area	Weighting (%)
Knowledge and Comprehension	50%
Application	30%
Analysis	20%

Table 1: Weighting of Assessment Objectives

The aims of this report are to:

- describe the candidates' overall performance in the paper.
- give an insight about the general difficulties faced by candidates.
- indicate which questions were well answered by candidates.
- show expected answers for certain questions.

The NCE Examiners' report for ICT offers valuable feedback on the performance of candidates and is meant to guide future candidates when preparing for the assessment.

This report should be read in conjunction with the 2022 ICT question paper for the assessment, available on the MES website.

PAPER OVERVIEW

The paper consists of 11 questions organised into two sections namely, **Section A** and **Section B**. The overall breakdown of the paper is given in **Table 2**.

	Questions	Number of marks
Section A	1 to 5	50
Section B	6 to 11	50

Table 2 - Breakdown of the ICT paper

The paper included different types of questions such as multiple-choice questions (MCQs), fill in the blanks, True/False, matching, labelling, ticking (✓), short- answer questions, sequencing and computational questions. An outline is provided in **Table 3** along with the number of marks allocated for each question.

Section	Question	Types of questions	Marks allocated
Section A (50 marks)	1	Multiple choice questions (MCQs).	15
	2	Fill in the blank questions.	10
	3	True/False questions, where the candidates were required to use a (✓) to indicate their answers.	10
	4	The first part of the question was based on matching and the second part was labelling.	10
	5	Part (a) was a multi-select question and for part (b) candidates were required to tick (✓) only one option.	5
Section B (50 marks)	6	Short answer questions based on a table of specifications of two laptop computers.	7
	7	Multiple choice question (single-select), sequencing and fill in the blanks.	7
	8	Tick (✓) and short answer questions.	9
	9	Short answer questions and tick (✓) based on a spreadsheet.	10
	10	Matching, short answer questions and labelling.	7
	11	Part (a) was related to labelling and the part (b) was a computational type question.	10

Table 3 -Types of questions and marks allocated

Key messages

- **Section A** of the paper was accessible to candidates in general. Many of them scored good marks which improved their overall score in the paper.
- Candidates must read each question carefully and follow all instructions given when answering the questions.
- It is important for candidates to be able to apply their knowledge of the different topics to fulfill the requirements of certain questions.
- ICT being a technical subject, it is recommended that candidates use appropriate technical terms related to specific concepts when answering.
- Candidates should clearly indicate their selected option when answering MCQs and to insert the (✓) within the allocated space to avoid any confusion to examiners.
- Any new answers should be clearly written after crossing out any incorrect ones or related rough work.

General Comments






- Candidates were required to answer all the questions.
- A few candidates did not attempt some multiple choice and TRUE/FALSE questions.
- The questions related to databases were quite challenging for many candidates.
- Dry running of flowchart continues to be problematic for many candidates. They were unable to differentiate between variables and the values to be inserted in the trace table.
- Some candidates had difficulty to differentiate between the flowchart symbols and thus incorrectly wrote the statements.
- Question 8(c) was challenging for candidates to answer. They could not correctly identify two different purposes of the VPN.
- For Question 8(d), candidates could not clearly distinguish between the purposes of a NIC and a MODEM.
- Question 4(b) was the most popular among candidates with most of them scoring at least 1 mark.

Comments on specific questions

SECTION A

Question 1 (15 marks – 1 mark per correct answer)

This question consists of 15 multiple choice questions (MCQs). Candidates were required to correctly identify one answer for each item.

Part	Correct Answer	Remarks
i.	B	<p>Most of the candidates correctly identified B as the correct answer. The icons provided were helpful.</p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <p>(i) Which application software can be used to view web pages on the internet?</p> <div style="display: flex; justify-content: space-around; align-items: center; text-align: center;"> <div style="margin: 5px;">  MS Word </div> <div style="margin: 5px;">  Google Chrome </div> <div style="margin: 5px;">  MS Excel </div> <div style="margin: 5px;">  MS Paint </div> </div> </div>
ii.	A	<p>This item was well answered by many candidates. However, option C was a major distractor.</p>
iii.	D	<p>Many candidates gave the correct answer D. Nonetheless, option C was a popular distractor.</p>
iv.	A	<p>This was the least well-answered MCQ item.</p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <p>(iv) The figure below shows a print layout from PowerPoint. Which type of print layout is it?</p> <div style="text-align: center; margin: 10px 0;">  <p>The microcomputer is small in size. It is low-cost and also known as Personal Computer.</p> </div> <ul style="list-style-type: none"> A Notes pages B Outline C Handouts D Full page slides </div> <p>Many candidates were not able to identify the correct print layout which was option A (Notes pages). Candidates did not pay attention to the speaker's notes given below the slide. Option D - 'Full page slides' was a strong distractor as nearly half of the candidate population opted for it.</p>

v.	C	This was the most well answered MCQ item. Nearly 96 % of the candidate population correctly related the name in cell A5 to its corresponding value in cell B5.
vi.	B	Many candidates were able to identify the correct network topology 'Bus'. A few candidates wrongly opted for 'Mesh' topology.
vii.	B	Candidates confused between the popular distractor 'Wiki' and the key 'Blog'. It appears that many candidates were not familiar with these terms.
viii.	D	It was noted that many candidates incorrectly associated 'allocation of storage space to programs and data' to 'File Management' instead of 'Memory Management'.
ix.	B	This item was generally well answered.
x.	A	Many candidates correctly attempted this item.
xi.	B	This item was fairly well answered. Some candidates incorrectly opted for A - 'General speech balloon' or C - 'Thought balloon'.
xii.	B	A few candidates wrongly opted for 'Selection' or 'Sequence' instead of the key 'Repetition'.
xiii.	B	This item was fairly well answered. However, option D , 'Wifi' was a major distractor.
xiv.	C	More than 75 % of the candidate population correctly identified 'Internet Service Provider' for ISP .
xv.	D	<p>This item was not well answered by many candidates.</p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <p>(xv) Which field is used as a primary key in a school students' database?</p> <p>A Student phone number</p> <p>B Student date of birth</p> <p>C Student class</p> <p>D Student number</p> </div> <p>Candidates should understand that the values in a key field need to be unique for each record in the database.</p>

NOTE:

In cases where candidates wrongly encircled an option in the multiple-choice questions, they are advised to:

either

- cross out the option which was wrongly selected and encircled.
- encircle the letter corresponding to the option they now think is correct and indicate this clearly using an arrow and the word 'Answer', as illustrated below:

(xiii) Which **web service** allows the streaming and downloading of audio

A Forum

B Podcast ← *Answer*

C Twitter

D Wifi

or

- cross out the option which was wrongly selected and encircled.
- encircle the letter corresponding to the option they now think is correct and indicate this clearly using an arrow only as illustrated below:

(xiv) What does **ISP** stand for?

A International Service Provider

B Internet Sites Provider

C Internet Service Provider ←

D Internal Service Provider

Question 2 - Fill in the blanks questions (10 marks – 1 mark per correct answer)

This question was successfully attempted by many candidates. Around 43 % and 53 % of candidate population scored full marks for parts A and B respectively and nearly 64 % of the cohort was able to score at least 3 out of 5 marks.

However, some confusions were noted:

- For part **(A)**, candidates incorrectly used the terms '*network*' and '*server*' for item (iv).
- For part **(B)**, items (iii), (iv) and (v) were problematic as some candidates seemed not to be familiar with the terms '*computer ethics*', '*plagiarism*' and '*handouts*'.

(A)

No	Correct Answer	Remarks
i.	RSI	Mostly well answered, candidates correctly identified RSI as ' <i>Bad posture</i> '.
ii.	Ergonomic	Most candidates correctly related 'back pain' to the use of ' ergonomic ' chair as a means of prevention. This was the most well-answered item for part A .
iii.	Backup	Mostly well answered.
iv.	Server	Some candidates confused between the correct answer 'server' and 'network'. This was the least well-answered item for part A .
v.	Binary	Mostly well answered with candidates successfully relating ' <i>0s and 1s</i> ' to ' <i>binary</i> ' data.

(B)

No	Correct Answer	Remarks
i.	Web browser	This was the most well answered item in part B , with candidates correctly identifying ' <i>web browser</i> ' as the program required to view web pages.
ii.	Terminal	This item was fairly well answered. A few candidates wrongly opted for ' <i>Password</i> '.
iii.	Computer ethics	A few candidates were confused between the terms ' <i>computer ethics</i> ' and ' <i>plagiarism</i> '.
iv.	Plagiarism	
v.	Handouts	This item was fairly well answered. Incorrect answers that were given by candidates included ' <i>plagiarism</i> '.

Question 3-Tick (✓) the correct boxes (10 marks – 1 mark per correct answer)

No	Correct Answer	Remarks
(b)	True	More than three quarter of the candidate population correctly answered item (b). Candidates showed understanding that ' <i>paper jam</i> ' can be a reason for the printer not working properly.
(c)	True	<p>Item (c) was the most well answered part of question 3. Candidates were able to relate the term '<i>hacking</i>' to '<i>unauthorised</i>' access.</p> <div style="border: 1px solid black; padding: 5px;"> <p>c) Hacking means to gain unauthorised access to a computer.</p> </div>
(d)	False	<p>Many candidates wrongly answered item (d). Candidates were not familiar with the features available in the '<i>Home Tab</i>'.</p> <div style="border: 1px solid black; padding: 5px;"> <p>d) The Home Tab allows us to create a table of contents and table of figures.</p> </div>
(e)	True	Item (e) was fairly well answered. However, some candidates were not familiar with the features available in the ' <i>Insert Tab</i> '.
(f)	False	<p>Item (f) was well answered by most candidates. Candidates correctly understood that a ring topology does not have any central component.</p> <div style="border: 1px solid black; padding: 5px;"> <p>f) In a ring topology, each node is connected to a central computer.</p> </div>
(g)	False	More than 75% of the candidate population answered item (g) well as they correctly identified that a computer virus is not a hardware.
(h)	True	For item (h), many candidates demonstrated good knowledge of the availability of free plagiarism checkers on the internet.
(i)	True	For item (i), candidates correctly understood the use of radio waves by WiFi to provide wireless internet.
(j)	True	Item (j) was the second most well answered part of question 3. Most candidates correctly understood that a flowchart is read from top to bottom.

(k)	False	<p>Item (k) was the least well answered part of question 3 as more than half of the candidate population gave the wrong answer. Many students had difficulty in understanding the concept of 'query' and wrongly selected 'True' as the answer.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>k) A query in a database is used to input data into a table.</p> </div>
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Question 4 - (10 marks: Part (a) – 6 marks and Part (b) – 4 marks)





4(a) Match Column A to Column B

The majority of the candidates used the grid to record their answers; however, some candidates used connecting lines to show their answers.

Item	Remarks	Correct Answer
(ii)	Most candidates correctly identified option 4 from Column B.	4
(iii)	Most candidates successfully identified 'error handling' as one of the functions of an operating system.	6
(iv)	Nearly half of the candidate population could not correctly identify option 8 as the correct answer.	8
(v)	Many candidates correctly identified option 7.	7
(vi)	This item was fairly well answered. Some candidates confused PAN with LAN and therefore, gave the incorrect answer.	5
(vii)	Most candidates could identify the correct match-option 1. This item on 'Game addiction' was the most well answered part of question 4 (a).	1

4(b) – Label pictures

Correct Answers

	
(i) Microphone	(ii) Router
	
(iii) Printer	(iv) Compact Disc

Above 95% of the candidate population correctly answered this part of the question-gaining full marks. Most candidates were able to score at least 1 out of the 4 marks. In exceptional cases, the microphone was mistaken for a mouse and the router was mistaken for a printer.

Question 5 [5 marks: Part (a) – 3 marks and Part (b) – 2 marks]

5 (a) Tick (✓) the three (3) possible solutions to make the speakers work.

The majority of candidates correctly ticked 1, 3 and 5.

1	Check that the cable is plugged to the correct port in the computer system.	✓
2	Press the ENTER key on the keyboard.	
3	Check the volume level in the computer system.	✓
4	Run a virus scanner.	
5	Check if the power cord of the speakers is connected to the socket and that power is turned on.	✓

However, some candidates did not follow the instructions in the question which required only three options to be selected.

5 (b) Tick (✓) the correct key combination which needs to be pressed to retrieve a file which has been deleted accidentally.

Many candidates correctly identified 'Ctrl + Z' as the correct answer. Some candidates did not score any marks since they described the purpose of the given shortcuts.

SECTION B

Question 6 (7 marks)

(a) Most candidates correctly identified Laptop B as having a higher processor speed.

(b) (i)

(b) (i) What is the memory size of Laptop A ? [1]
--

Many candidates confused memory size with hard disk capacity and, therefore, incorrectly gave '500 GB' instead of '4 GB'.

(ii)

(ii) Give one advantage that Laptop B has over Laptop A in terms of memory size [1]
--

Many candidates were able to give one advantage of Laptop B over Laptop A. However, in some cases, candidates did not score the mark as the advantage provided was not related to memory size.

(c)

(c) Which laptop can be used to perform a backup of data more easily? Why? [2]
--


Nearly half of the candidate population scored full marks. Many candidates were able to score 1 mark for correctly identifying Laptop B. However, some candidates did not earn the second mark because the reason given was not valid. Candidates were expected to either relate to the specifications given in the question when giving their answers or to indicate that laptop B can be selected for performing an easy backup. Most common answers were related to the speed of laptop B. Marks were also allocated when reference were made to other valid features.

(d) This part was well answered by most candidates. A few candidates did not understand the question and wrongly stated the specification for the webcam of Laptop B.

Question 7 (7 marks)

(a)

Question 7 (7 marks)

(a) Tick (✓) the correct **tab** that needs to be clicked to access the icon 

Mailings tab Layout tab Design tab

[1]

Generally, this question was well answered by most candidates. The most common incorrect option chosen was the '*Layout tab*'.

(b) Many candidates were able to score full marks in this part question. Those who lost marks were unable to determine the correct order of the mail-merge steps. The expected answer was:

Step	Order
Insert fields to merge the two documents	3
Create a mailing list	1 / 2
Create a template	2 / 1

(c) This part of the question was well answered by more than three quarter of the candidate population who scored full marks. However, a few candidates missed one or two fields while writing their answers.

Question 8 (9 marks)

(a)

(a) Put a **tick (✓)** to indicate whether each statement below refers to the **Intranet** or the **Extranet**.

Statement	Intranet	Extranet
A private network which is accessible to members within an organisation only.		
A private network that allows authorised users from outside an organisation to access it.		

Most candidates were able to correctly tick '*intranet*' for the first statement and '*extranet*' for the second statement.

(b) Many candidates correctly gave the full form for the acronym of VPN as '*Virtual Private Network*'. Some incorrect answers included Virtual Personal Network, Virtual Process Network or Virtual Public Network.

(c) This part question was quite challenging for many candidates who could not understand the purpose of a VPN. Marks were allocated to answers related to creating a secure connection or protection of online privacy or remote users connecting to a server. Other valid answers were considered and marks were allocated accordingly.

(d) Candidates had difficulty to explain the purpose of (i) NIC and (ii) MODEM and, therefore, could not score full marks.

(d) Explain the **purpose** of a

(i) **Network Interface Card (NIC)**

.....

..... [2]

(ii) **MODEM**

.....

..... [2]

Candidates could not correctly understand that a NIC allows a computer to be connected to a network. Many candidates confused the terms MODEM and Router. In some cases, candidates gave general answers that could not be awarded marks. More than 65% of the candidate population could not score any mark for part (d)(i) and (d)(ii).

Question 9 (10 marks)

(a)

(a) Write down the cell in which you can find the following information:

(i) BMI of 36.79

(ii) Height (M) of 1.68

[2]

Some candidates did not identify the correct cell addresses. Common incorrect answers were 'Keerthi' for part (i) and 'Sanchita' for part (ii). A handful of candidates gave either the column letter or row number and, thus, no marks could be allocated.

(b)

(b) Tick (✓) the correct **formula** that has been used in cell **D2** to calculate the **BMI of Sanchita**.

=sum(B2:C2) =B2/(C2*C2) =B2*C2

[1]

Many candidates selected the correct formula.

(c)

(c) Write the **formula** that needs to be placed in cell **D7** to find the **average BMI**.

.....

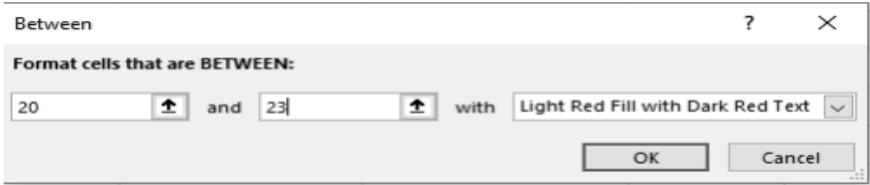
[2]

Less than 25% of the candidate population scored full marks for this part question. Common mistakes were incorrect range and incorrect function. Some candidates wrongly reproduced the formula for calculating BMI. This part was not attempted by a few candidates.

(d) Nearly half of the candidate population did not score any mark for this part question. In some cases, the condition was correctly written but the output was incorrect. In other cases, the condition was left blank or was incorrect, but the output was correct.

(e)

(e) **Conditional formatting** is applied to cell **D2:D6** as follows:



Name a **cell** that will be formatted.

.....

[2]

Part (e) was fairly well answered. Some candidates gave the value 22.86 instead of the cell address D3.

(f)

(f) The formula `= COUNTIF(E2:E6,"Normal")` is used in E7.

What will be the **output**?

.....

[1]

Part (f) was well answered by many candidates. However, a few candidates gave the 3 cell addresses instead of the value 3 and thus no mark was allocated. It is important for candidates to understand that the COUNTIF() function returns an integer value and not cell addresses.

Question 10 (7 marks)

(a) Most candidates correctly matched the terms in Column 1 with their corresponding descriptions in Column 2.

(b) (i) Around 80% of the candidate population were able to identify that there were 5 records.

(ii)

(ii) The following **search condition** is entered using a **query by example** grid.

Field	COURSE_ID	ROLL
Table	COURSES	COURSES
Sort	DESCENDING	
Show	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria		< 30
Or		

State what will be the output of this **query by example**.

.....

..... [2]

This part proved to be challenging for most candidates as less than 20 % of the candidate population were able to score at least 1 out of 2 marks. Some candidates listed only one output instead of 2. Other candidates did not give the output in the correct order. A handful of candidates listed additional fields with the output.

(iii) This part was also problematic for many candidates as nearly 50 % of the candidate population could not score any mark. Some candidates did not attempt this part. Many candidates copied the sort order and “<30” from part (ii) into part (iii) even though these were not required.

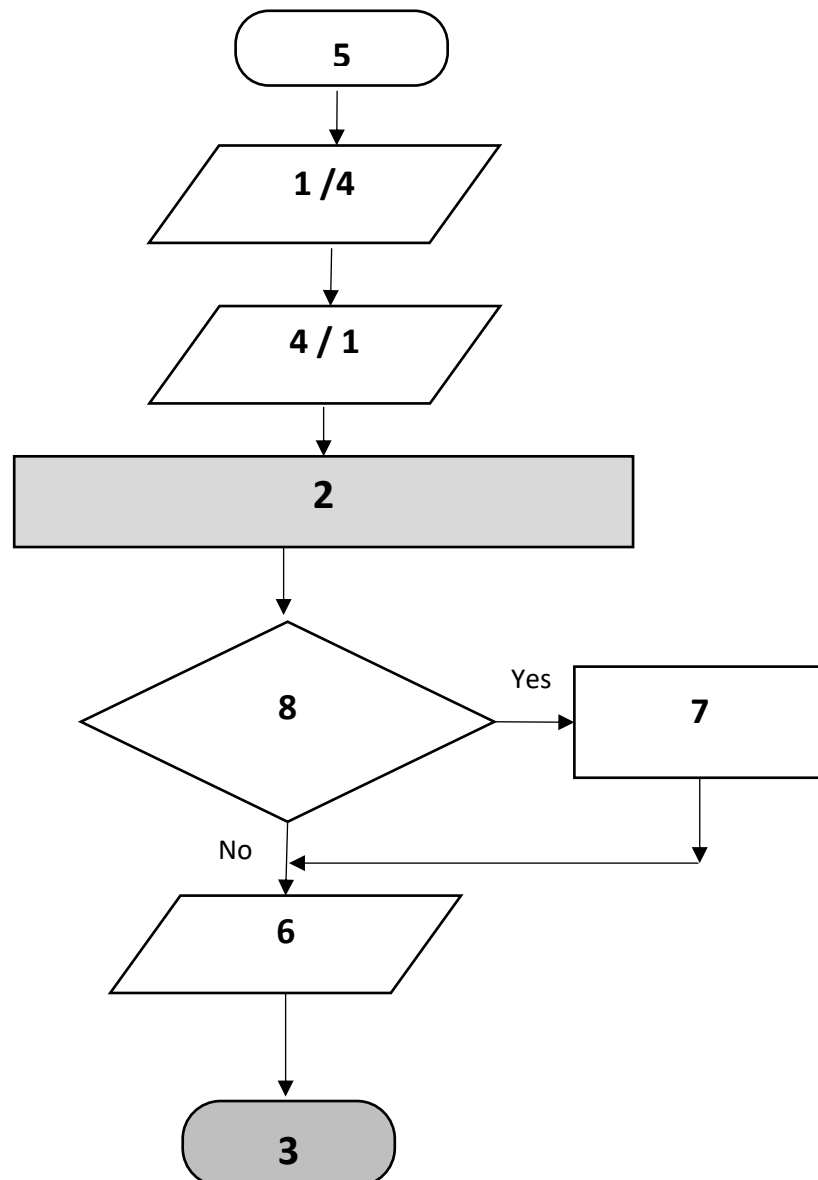
The **QBE grid** below shows an expected answer. However, other valid answers were also considered.

Field	COURSE_NAME	CAMPUS
Table	COURSES	COURSES
Sort		
Show	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria		= "REDUIT"
Or		

Question 11 (10 marks)

(a) This part was relatively well answered by most candidates and around 50 % of the candidate population were able to score full marks. However, a number of candidates did not follow the instructions and wrote the statements instead of inserting the appropriate number in the symbols. Most candidates scored at least 1 mark in this part.

A common mistake was the inability of some candidates to differentiate between the process symbol and the decision one thereby assigning the incorrect statement number. Some candidates did not pay attention to the fact that two examples were given to them and they wrote the corresponding statement in the symbols by crossing out the statement numbers. It was also noted that some candidates referred to part (b) when answering part (a). As such incorrect statements such as 'Input X, Y' or 'Output Z' were found. The figure below shows the expected answer for this part question.



- (b) Around 15% of the candidate population was able to score full marks in this part question. However, nearly 75 % of the candidate population was not able to score any mark. Many candidates did not attempt it.

Many candidates wrote the variable names **X** and **Y** as output instead of the respective values. The same was noted for the 'Process' column. Some candidates did not complete the 'Process' column.

The table below shows the expected answer.

INPUT		PROCESS	OUTPUT
X	Y	Z	
10	2	14	10, 2
4	2	8	8
1	3	10	10
8	4	24	8,4

Suggestions /Recommendations

1. Students should be encouraged to:
 - read the questions carefully.
 - identify the key elements of a question.
 - focus on the key words of a question which are often set in bold.
2. Write an answer in relation to the marks allocated for the question.
3. Candidates should properly describe the term or concept whenever required. They should focus on key parts of the definition or explanation.
4. Many candidates experienced difficulties when answering questions which assessed their knowledge of application software. It is important for candidates to identify the features of the different application programs and the tabs to be used to access them.
5. Students need to practise more questions on spreadsheets that focus on:
 - Writing different formulas
 - Use of IF() and COUNTIF()
 - Different options available for conditional formatting
6. For databases, students are encouraged to:
 - analyse and understand a given QBE grid.
 - retrieve the required records and fields based on a given QBE grid.

- represent a given scenario by correctly completing a given QBE grid.

7. For flowcharts, students should be able to:

- properly identify and draw symbols required at a given stage.
- relate key words in a statement to a flowchart symbol, for example, any statement that starts with “/s” indicates the use of a decision symbol.
- identify the sequence of steps in the given scenario in the question so that the flowchart is correctly drawn or labelled.
- dry run a flowchart by substituting values of variables and identify the correct path to follow with the aim of finding valid outputs or processing.
- correctly fill in the dry run table.