



No.82

MARKER CODE			

Student Personal Identification Number					

TONGA GOVERNMENT
MINISTRY OF EDUCATION AND TRAINING

TONGA SCHOOL CERTIFICATE 2015 COMPUTER STUDIES

QUESTION AND ANSWER BOOKLET

Time allowed: 2 Hours

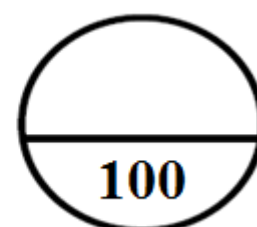
INSTRUCTIONS

1. Answer ALL questions
2. Write your **Student Personal Identification Number (SPIN)** on the top right hand corner of this page and on the last page.
3. The answer sheet for SECTION A is found on page 2.
4. Check that this Booklet contains pages 2 – 27 in the correct order. Page 26 has been deliberately left blank.
5. The paper is out of 100 marks and is apportioned as shown below:

SECTION	DESCRIPTION	MARKS
A	Multiple Choice Questions	20
B	Question 1: General Computer Knowledge	16
	Question 2: Hardware	16
	Question 3: Word Processing	8
	Question 4: Spreadsheet	8
	Question 5: Database	8
	Question 6: Operating System	12
	Question 7: Software	12
TOTAL MARKS		100

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

TOTAL MARKS



MULTIPLE CHOICE ANSWER SHEET

Remember to write the letter of the correct answer only

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

Markers use only

1 mark	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1																				
0																				
NR																				

TOTAL MARK

20

SECTION A:**MULTIPLE CHOICE****(20 marks)**

Write the **LETTER** of the **BEST** answer for each question in the correct box on page 2. If you want to change your answer, put a cross through your first answer and write the letter of your new choice beside the box.

1. Computers are fast with excellent memories. However, text and processor instructions use only the binary number digits.
 - A. 0 only
 - B. 1 only
 - C. 1 to 9 only
 - D. 0 and 1 only

2. A brownout is defined as:
 - A. complete power out lasting a few minutes.
 - B. when electricity usage is decreasing from normal.
 - C. a slightly elevated voltage lasting from seconds to minutes or more.
 - D. a slightly decreased voltage lasting from seconds to minutes or more.

3. Wireless technology includes Bluetooth. Which of the following discourage the use of the mentioned technology in workplaces?
 - A. security is not good.
 - B. very slow data transfer speeds.
 - C. short distance of coverage with limited signal strength.
 - D. all of the above.

4. When converting the decimal number 1001 to binary system, the answer will be _____.
 - A. 1001
 - B. 01001
 - C. 1001011111
 - D. 1111101001

5. The unit of a computer system that executes program, communicates with and often controls the operation of other sub-systems of the computer is known as _____.
- A. CPU
 - B. Control Unit
 - C. Peripheral Unit
 - D. Operating System
6. Before a disk drive can access any sector record, a computer program has to provide the record's disk address. What information does this address specify?
- A. Track number
 - B. Sector number
 - C. Surface number
 - D. All of the above
7. The type of memory mainly used for storing of program instructions that are frequently re-referenced by software during operation is called:
- A. RAM
 - B. ROM
 - C. CMOS
 - D. CACHE
8. Name the table formatting that is described below.
- A** – Combines two or more cells into one cell
B – Re-divide a single cell into two or more cells
- A. **A** = Combine ; **B** = Divide
 - B. **A** = Merge cells ; **B** = Split cells
 - C. **A** = Add cells ; **B** = Dividing cells
 - D. **A** = Cell Integration ; **B** = Cell Splitting

9. In word-processing, the tool that automatically correct common words when being typed such as replacing 'hte' with 'the' is called
- Thesaurus
 - Find and Replace
 - Spelling check/tool
 - Grammar check/tool

Use the worksheet below for answering questions 10 and 11.

	A	B	C	D	E	F	G	H	I
1	Solo Blueprint								
2	Topic	Uni-structural		Multi-Structural		Relational		Extended	
3	Skill Level	1		2		3		4	
4		Num. of question per topic	% per topic	Num. of question per topic	% per topic	Num. of question per topic	% per topic	Num. of question per topic	% per topic
5	GCK	6	6	2	4	2	6	1	4
6	HW	6	6	2	4	2	6	1	4
7	WP	2	2	1	2	2	6	0	0
8	SS	4	4	1	2	0	0	1	4
9	DB	3	3	2	4	1	3	0	0
10	OS	4	4	2	4	1	3	1	4
11	SW	5	5	0	0	2	6	1	4
12	TOTAL	30	30	10	20	10	30	5	20

10. Which of the following formula will be used in cell **C5** and can be copied and used in cell **E5**, **G5** and **I5** with no further editing needed?
- =B5 * B3
 - =B5 * B\$3
 - =B5 * \$B\$3
 - =\$B\$5 * \$B\$3

11. Part of the worksheet on page 5 has to be printed (i.e. cell **B2** to **I12**). Which of the following should be done to complete this requirement?
- A. Print Active Sheets.
 - B. Print Entire Workbook.
 - C. Print the selected page only.
 - D. Define and Set the Print Area before printing.
12. Periodically adding, changing and deleting file records is called _____
- A. File updating.
 - B. File upgrading.
 - C. File renewing.
 - D. File data integrity.
13. Which part that is needed to boot up an IBM compatible Personal Computers?
- A. POST
 - B. EPROM
 - C. RAM BIOS
 - D. ROM BIOS
14. What type of computer virus are usually hidden in executable files?
- A. Boot sector virus
 - B. File based virus
 - C. Macro virus
 - D. Aids virus
15. What type of operating system that is commonly used today on people's desktop and laptop computers?
- A. Network Operating System
 - B. Multi-user, Multi-tasking Operating System
 - C. Single-user, Multi-tasking Operating System
 - D. Single-user, Single-tasking Operating System

Use the database table below to answer question 16.

Firstname	Gender	MaritalStatus	PlaceOfOrigin	1Major4Qualificat1	#yearService	ReachMAX
Adrian	M	Married	Fasi, Tt	Maths	24	no
Solomone	M	Married	'Esia, Niuafo'ou	Maths	11	no
Ferdinand	M	Single	Austria, Germany	English	17	yes
Patelesio	M	Married	Fangaloto, Tt	Agriculture	1	no
Stafney	F	Married	Popua, Tt	Computer Science	1	no
Solo	M	Married	Pelehake, Tt	Maths	11	yes
Fane	F	Single	'Esia, Niuafo'ou	English	12	yes
Pauliasi	M	Single	'Utulau, Tt	Accounting	1	no
Po'uli	M	Married	Taoa, Vava'u	Geography	5	no
Salote	F	Married	Pangaimotu, Vava'u	Accounting	19	yes
Sekona	M	Married	Ha'ateiho, Tt	Geography	5	no
Taniela	M	Married	Longomapu, Vava'u	Maths	5	no
Saite	F	Married	Felemea, Ha'apai	Maths	3	no
Nanise	F	Married	Sapa'ata, Niuafo'ou	Biology	7	no
Na'asipa	F	Married	Kolovai, Tt	Accounting	3	no
Sitiveni	M	Married	Vaipoa, NTT	Accounting	3	no

16. Which of the following will display the Firstname as output when the query with the criteria below is run and sorted in ascending order using the #yearService field?

Gender = "M" and ReachMAX ="Yes"

- A. Solo, Fane, Salote, Ferdinand
 - B. Solo, Ferdinand
 - C. Fane, Salote
 - D. Adrian, Ferdinand, Salote, Fane, Solo
17. What type of programs are designed to enable the user to complete tasks like designing graphics, playing games, and online research?
- A. System software
 - B. Operating system
 - C. Utility programs
 - D. Application software

18. Which of the following is needed for troubleshooting a computer especially when the computer cannot boot by itself?
- A. A Boot disk
 - B. A System Boot Sector disk
 - C. Anti-virus to clean for viruses
 - D. Application software startup disk
19. UNIX and Linux are examples of which type of Operating System?
- A. Multi User Operating System
 - B. Single User Operating System
 - C. Multi-Tasking Operating System
 - D. Multi User Multi-Tasking Operating System
20. Which part of the window that shows the programs are automatically started by the Operating System when the computer starts up?
- A. The Taskbar
 - B. The Toolbar
 - C. The System Tray
 - D. The Start Button

SECTION B:**SHORT ANSWERS****(80 marks)****QUESTION ONE: GENERAL COMPUTER KNOWLEDGE****(16 marks)**

1. Your Principal had requested your help to identify TWO computers to be donated for the GPS Nuku'alofa and Niuafo'ou District High School.

Name the categories of computers that will be selected for each school and give a reason for your selection.

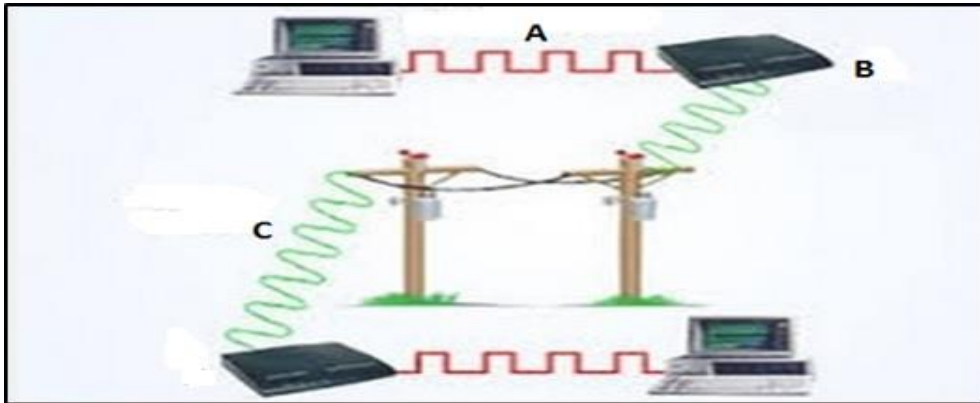
2 marks	
2	
1	
0	
NR	

2. A Form7 student had managed to finish off designing a video clip for his first Internal Assessment on the topic called Media Production.

Describe the inputs required and the processes taken in order to complete this task. Give an example to support your answer.

3 marks	
3	
2	
1	
0	
NR	

3. a. Study the diagram and explain the type of network presented on the diagram and its advantages.



3 marks	
3	
2	
1	
0	
NR	

- b. Name parts labelled **A** to **C** in the above diagram.

A. _____

B. _____

C. _____

1 mark	
1	
0	
NR	

4. The diagram below shows a flash disk and a hard disk on display at a local shop. Each disk costs \$20 each.



Beside the disk storage capacity, give another difference between the two types of disk.

1 mark	
1	
0	
NR	

5. Study the information given in the box below then put them in a **folder structure**.

Use the space provided for your answers.

“The folder **MET** is in the root of the network with the drive letter **Z**. Inside the MET folder are the following sub-folders: **L&T, QA** and **Others**. L&T has subfolders called **Primary, Secondary** and **Others2**. **EAU** is a subfolder of **QA**.

2 marks	
2	
1	
0	
NR	

6. Discuss the key benefits of **backup** to students using familiar examples.

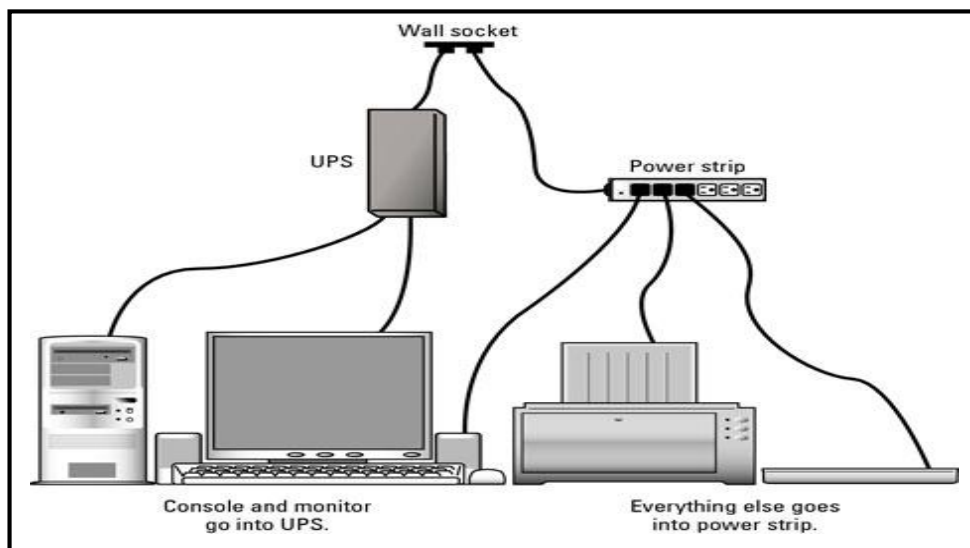
4 marks	
4	
3	
2	
1	
0	
NR	

QUESTION TWO:**HARDWARE****(16 marks)**

1. Discuss some guidelines in taking proper care of a mouse.

2 marks	
2	
1	
0	
NR	

2. The diagram below shows a computer which is connected to a UPS with others connecting directly to the power supply through the power strip.



Use the picture above as a hint to explain the effect of a UPS connected to a Personal Computer when there are power fluctuations or even a power outage.

3 marks	
3	
2	
1	
0	
NR	

3. Study the picture below then answer the questions that follow.



1 mark	
1	
0	
NR	

Categorize the devices above (using the labeled letters) into input or output or both (input and output).

Input: _____

Output: _____

Both: _____

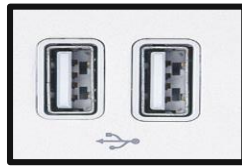
4. Briefly explain why a fax machine is considered an input and output device.

2 marks	
2	
1	
0	
NR	

5. Define the term computer peripheral.

1 mark	
1	
0	
NR	

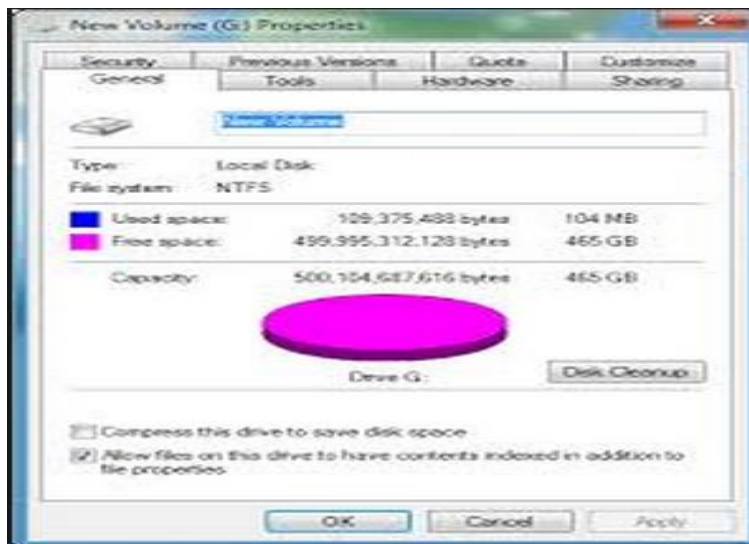
6. Explain the advantages of the port shown below.



2 marks

2	
1	
0	
NR	

7. The diagram below shows the information about a computer disk.



- a. Name the process that the computer will use to prepare the disk for storing of data.

1 mark

1	
0	
NR	

- b. Briefly explain the effect of the process named in (a) above to the user and the computer.

4 marks

4	
3	
2	
1	
0	
NR	

- Use examples to explain two of the formatting methods that you may use.

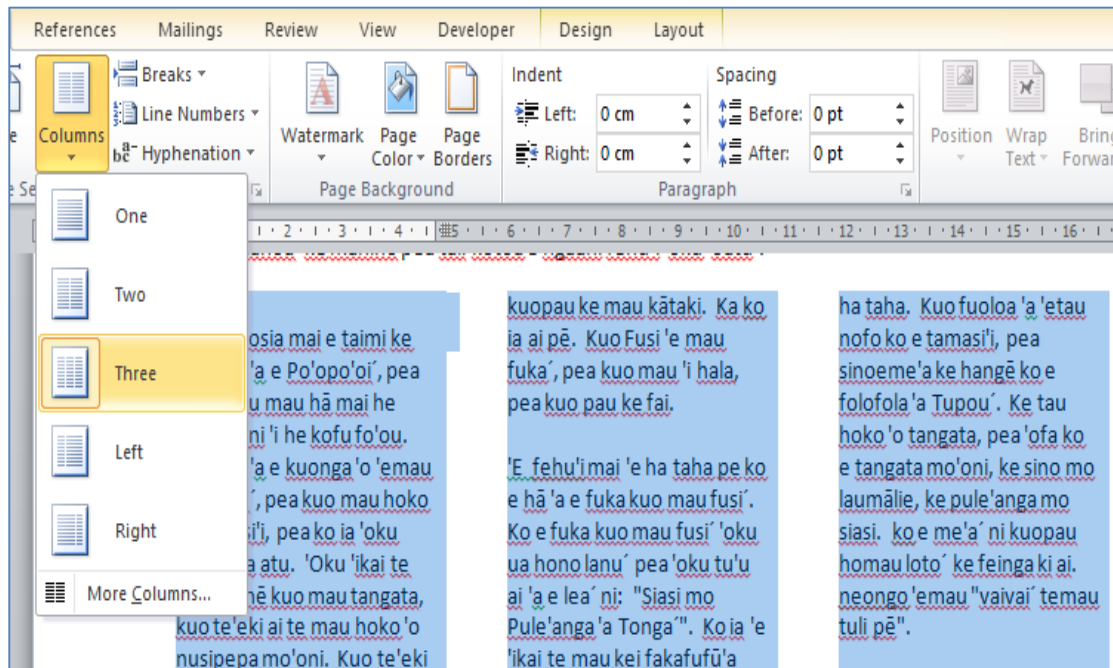
[illegible]

3 marks	
3	
2	
1	
0	
NR	

- ## Word-wrap, Thesaurus and Mail Merge

3 marks	
3	
2	
1	
0	
NR	

3. One of the tools of word processing is the ability to display data in different columns such as the one shown below.



Describe the main use of the column feature shown on the diagram.

2 marks	
2	
1	
0	
NR	

	A	B	C	D
1	Total number of classes in each level plus total students in all Government Schools in Tonga - 2015			
2	LEVELS	Student Total	Total Forms per Level	
3	Level 5	568	19	
4	Level 6	627	19	
5	Level 7	307	11	
6	TOTAL			
7				

- [illegible]

4 marks	
4	
3	
2	
1	
0	
NR	

2. Give the range of cells to use for drawing a graph to present the following information.

- i. The levels
 - ii. The total student totals and
 - iii. Total of Total forms per level
- for all Government Schools in Tonga

1 mark	
1	
0	
NR	

2. The data is to be sorted first using the “*Total Forms per Level*” in ascending order then by “*Student Total*” in descending order. Complete the table with the sorted output.

<u>Levels</u>	<u>Student Total</u>	<u>Total Forms per Level</u>

1 mark	
1	
0	
NR	

3. (Note: The number **40%** is located in cell **E1**).
It is projected that at least 40% of all students (total of Student Total) will pass the external examination at the end of this academic year.

Write a formula that will calculate the percentage of students who are going to pass. (i.e. 40% x total of Student Total). Formula must use the value in cell **E1** and **absolute referencing**.

2 marks	
2	
1	
0	
NR	

QUESTION FIVE :**DATABASE****(8 marks)**

1. A database with 2 tables is being designed by a student to record the following information:
- ❖ Table1 names “Personal”: It has their names, date of births, genders and addresses
 - ❖ Table2 names “Expenses”: It has their expenses on food, clothes, electricity and water
- a. Use the TWO tables below to fill in the field names and data types for each table according to the information given above. Each table should have 4 fields only.

Personal: Table	
Field	Data type

Expenses: Table	
Field	Data Type

1 mark

1	
0	
NR	

- b. Explain the steps involved in creating the relationship between the two tables above and the effects of not creating the relationship when using a Database management software.

3 marks

3	
2	
1	
0	
NR	

- c. Discuss in detail how the student will calculate his total expenses from his database.

2 marks	
2	
1	
0	
NR	

2. Data in databases must be correct in order to be efficient. One of the tools that help keeps the data correct is called data validation.

Describe ONE data validation method that you could apply on the field Gender to make sure the data entered will always correct.

2 marks	
2	
1	
0	
NR	

QUESTION SIX : OPERATING SYSTEMS (12 marks)

1. Describe device communication as one of the main OS functions.

2 marks	
2	
1	
0	
NR	

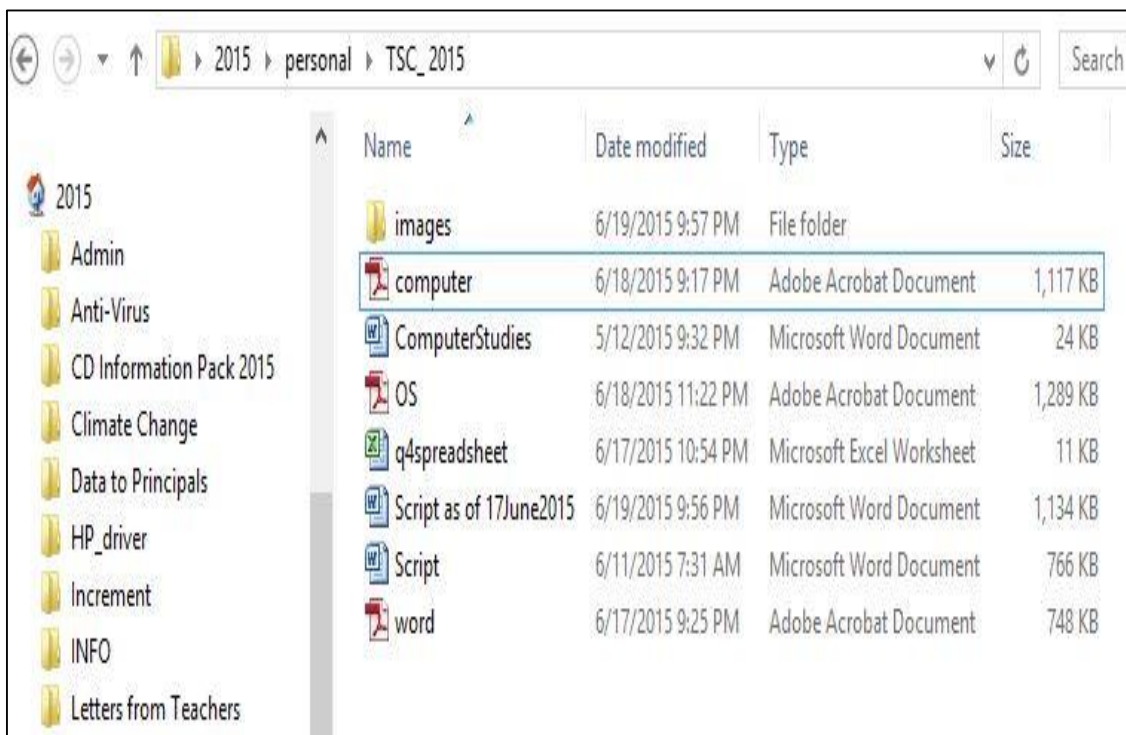
2. State the type of OS that can be used to perform the following:

- a. A student doing assignments and practical while listening to some music.

- b. A server for coordinating other computers.

1 mark	
1	
0	
NR	

3. Study the detail file structure below then answer the questions that follow.



- a. Explain the meaning of Operating System and give examples to what it does in the computer.

3 marks	
3	
2	
1	
0	
NR	

- b. State the Operating System process involved in moving the file OS.pdf to the folder INFO.

2 marks	
2	
1	
0	
NR	

4. Explain the term **boot disks**. Explanation must refer to how such disk is created, why is it important and when is it needed in a computer.

4 marks	
4	
3	
2	
1	
0	
NR	

QUESTION SEVEN: SOFTWARE (12 marks)

1. Explain the importance of the following software to a student.

An **application** program, a **utility** program **and** a **compiler**.

3 marks	
3	
2	
1	
0	
NR	

2. Discuss the positive and negative effects of software piracy on computer users.

3 marks	
3	
2	
1	
0	
NR	

3. MS Office is a software package that can allow users to perform many tasks. Name the MS Application that can perform the following:

- a. Designing slides for presentations

- b. Mathematical calculations

1 mark	
1	
0	
NR	

4. Comment on the impact of software licenses on users in poor countries.

4 marks	
4	
3	
2	
1	
0	
NR	

5. Name TWO characteristics of computer virus.

a.

b.

1 mark	
1	
0	
NR	

THIS PAGE HAS BEEN DELIBERATELY LEFT BLANK.

Student Personal Identification Number					

TONGA SCHOOL CERTIFICATE
2015
COMPUTER STUDIES
(For markers Use Only)

SECTIONS		MARK	CHECK MARKER	TOTAL
A	Multiple Choice			20
B	Question 1			16
	Question 2			16
	Question 3			8
	Question 4			8
	Question 5			8
	Question 6			12
	Question 7			12
TOTAL MARKS				100