

MARKER CODE				



STUDENT ENROLMENT NUMBER (SEN)									

TONGA SCHOOL CERTIFICATE

2017

COMPUTING AND ICT

QUESTION AND ANSWER BOOKLET

Time Allowed: 2 Hours + 10 minutes reading

INSTRUCTIONS:

1. Write your **Student Enrolment Number (SEN)** on the top right hand corner of this page.
2. Answer **ALL** questions in the spaces provided in this booklet
3. This paper consists of **10 QUESTIONS** and is out of **70 SKILL LEVEL**.

Question	Topics	Total Skill Level	Allocated Time
A	Digital Technologies	6	10
B	Computer Systems	16	27
C	Online Resources	8	14
D	PC Applications	4	7
E	Design Applications	4	7
F	Programming	5	9
G	Safe Handling of PCs	9	15
H	Careers in ICT	6	10
I	Ethical Issues	8	14
J	Environmental Issues	4	7
	TOTAL	70	120

4. If you need more space for any answer, ask the supervisor for extra paper.
5. Check that your paper consists of **15** pages.

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

QUESTION A: Digital Technologies

1. Digital technologies are everywhere and they're bringing many exciting opportunities for us here in Tonga. We see that around us today and these technologies are changing the way we work and live.

- a. Define digital technologies.

Skill level 1	
1	
0	
NR	

- b. Name **ONE** (1) of the key inventions in the early years of Personal Computers (PCs).

Skill level 1	
1	
0	
NR	

- c. Analyse the changes that have benefited Tonga over the years due to the use of digital technologies.

Skill level 4	
4	
3	
2	
1	
0	
NR	

QUESTION B: Computer Systems

1. Show your understanding of computer systems by answering the questions that follow.



- a. Name **ONE** (1) of the major components of a computer system.

Skill level 1	
1	
0	
NR	

- b. Name **ONE** (1) of the common Output devices of a PC.

Skill level 1	
1	
0	
NR	

- c. Name **ONE** (1) of the common Communication devices of a PC.

Skill level 1	
1	
0	
NR	

- d. Name **ONE** (1) of the common Processing devices of a PC.

Skill level 1	
1	
0	
NR	

2. There are different levels of data storage, that are referred to as Primary and Secondary storage.

a. Outline the major functions of PRIMARY storage devices.

Skill level 2	
2	
1	
0	
NR	

b. Outline the major functions of SECONDARY storage devices.

Skill level 2	
2	
1	
0	
NR	

3. When you press the power button of a working PC, a start-up process also known as a boot-up sequence is taking place. Outline the steps involved in the BOOT-UP sequence of a PC.

Skill level 2	
2	
1	
0	
NR	

- a. Technologies behind NON-IMPACT printers.

Skill level 3	
3	
2	
1	
0	
NR	

- | Skill level 3 | |
|---------------|--|
| 3 | |
| 2 | |
| 1 | |
| 0 | |
| NR | |

QUESTION C: Online Resources

1. Data networking provides the platform for people to stay connected.

a. Name **ONE** (1) of the common data networking devices.

Skill level 1	
1	
0	
NR	

b. Describe the purpose of the data network device named in question 1 a. above.

Skill level 2	
2	
1	
0	
NR	

c. Outline the main components of data communication.

Skill level 2	
2	
1	
0	
NR	

d. Explain the concept of data transmission.

Skill level 3	
3	
2	
1	
0	
NR	

QUESTION D: PC Applications

1. Everyone seems to know how to use most common PC applications today. Use your understanding of word processing, spreadsheet and database applications to answer the questions that follow.

- a. Name a type of chart used by spreadsheet applications for presenting specific user data.

		Skill level 1	
		1	
		0	
		NR	

- b. State a basic SQL command for creating a database table.

		Skill level 1	
		1	
		0	
		NR	

- c. Outline the common features used in a word processing, spreadsheet or a database application.

		Skill level 2	
		2	
		1	
		0	
		NR	

QUESTION E: Design Applications

1. Designing web pages may require a good understanding of HTML and the World Wide Web. Answer the following questions about some of the basic concepts of web-design.

- a. Define HTML.

		Skill level 1	
		1	
		0	
		NR	

- b. Define hyperlinks.

		Skill level 1	
		1	
		0	
		NR	

- c. Outline the required components for accessing information on the World Wide Web.

		Skill level 2	
		2	
		1	
		0	
		NR	

QUESTION F: Programming

1. Define the following;

a. Computer Programming.

Skill level 1	
1	
0	
NR	

b. Computer Programing SYNTAX

Skill level 1	
1	
0	
NR	

2. Perform the following binary operation. Show all your work.

i. 110111 – 10011

ii. 110011 + 10101

Skill level 3	
3	
2	
1	
0	
NR	

QUESTION G: Safe Handling of PCs

1. The main concerns with our growing use of computer technologies are safety and security. The need to protect Users, PCs and Computer networks are very important. Demonstrate your understanding of these concerns by answering the questions that follow.

- a. Name a safety condition that can cause a PC to fail.

Skill level 1	
1	
0	
NR	

- b. Name **ONE** (1) of the safety issues that can affect data networks.

Skill level 1	
1	
0	
NR	

- c. Outline key security issues affecting Internet Users.

Skill level 2	
2	
1	
0	
NR	

- d. Assess and report on security measures that can be used to protect data networks.

Skill level 2	
2	
1	
0	
NR	

- e. Explain the main concerns with Data Security in social media such as using Facebook.

Skill level 3	
3	
2	
1	
0	
NR	

QUESTION H: Careers in ICT

1. ICT is one of the fast growing sectors for employment opportunities in many countries. Show your understanding of such opportunities by answering the following questions.

- a. Define ICT professionals.

Skill level 1	
1	
0	
NR	

- b. Describe the main responsibility of an ICT Project Manager.

Skill level 2	
2	
1	
0	
NR	

- c. Explain the important characteristics expected from an ICT professional.

Skill level 3	
3	
2	
1	
0	
NR	

QUESTION I: Ethical Issues

1. It is very important for students to be aware of the growing ethical concerns with the use of computers and the Internet.

- a. Define computer ethics.

		Skill level 1	
		1	
		0	
		NR	

- b. State an ethical issue regarding Piracy in ICT.

		Skill level 1	
		1	
		0	
		NR	

- c. State an ethical issue with corporate confidentiality in ICT.

		Skill level 1	
		1	
		0	
		NR	

- d. Outline examples of key code of ethics for ICT professionals.

		Skill level 2	
		2	
		1	
		0	
		NR	

- e. Explain the ethical concerns with the growing use of the Internet.

Skill level 3	
3	
2	
1	
0	
NR	

QUESTION J: Environmental Issues

1. The effect that ICT has on the environment is of great concern to everyone these days.

- a. State **ONE** (1) of the main environmental concerns with the increasing use of ICT.

Skill level 1	
1	
0	
NR	

- b. Explain the common measures that can help reduce the impact of ICT on the environment.

Skill level 3	
3	
2	
1	
0	
NR	