



MARKER CODE

STUDENT ENROLMENT NUMBER									

Tonga National Form Seven Certificate

COMPUTING & ICT

2016

QUESTION and ANSWER BOOKLET

Time allowed: Two Hours

INSTRUCTIONS

1. Write your **Student Enrolment Number (SEN)** on the top right hand corner of this booklet.
2. Answer ALL QUESTIONS. Write your answers in the spaces provided in this booklet.
3. If you need more space for answers, ask the Supervisor for extra paper. Write your SEN on all extra sheets used and clearly number the questions. Attach the extra sheets at the appropriate places in this booklet.

	Pages	Time (mins)	SKILL LEVEL
QUESTION A Future Trends in ICT	2	9 min	5
QUESTION B Information Systems	3-4	19 min	11
QUESTION C ICT Infrastructure	5-6	15 min	9
QUESTION D Digital Design	7-8	15 min	9
QUESTION E Computer Programming	9	10 min	6
QUESTION F Microprocessor Programming	10-11	14 min	8
QUESTION G Safe Practice in ICT	12	12 min	7
QUESTION H Social Issues	13	10 min	6
QUESTION I Environmental Issues	14-15	15 min	9
TOTAL	2-15	120 min	70

Check that this booklet contain pages 1-15 in the correct order.

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

QUESTION A: Future Trends in ICT

1. Technological trends are transforming the way we live and work. Use your understanding of the future trends in Information Technology to answer the questions that follow.

- a) Identify an important future trend in the use of ICT in the area of Health.

Skill level 1	
1	
0	
NR	

- b) Identify an important future trend in the use of ICT in Government.

Skill level 1	
1	
0	
NR	

2. Explain the importance of the future trends of ICT to the development of Tonga.

Skill level 3	
3	
2	
1	
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NR	

QUESTION B: Information systems (IS)

1. One of the key drivers of modern organizations today is the use of Information Systems (IS). Show your understanding of IS by answering the questions that follow.

- a) Outline the common characteristics of specific IS applications.

Skill level 2	
2	
1	
0	
NR	

- b) Assess and report the benefits of IS experiences in Health.

Skill level 2	
2	
1	
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- c) Explain key IS development guidelines.

Skill level 3	
3	
2	
1	
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NR	

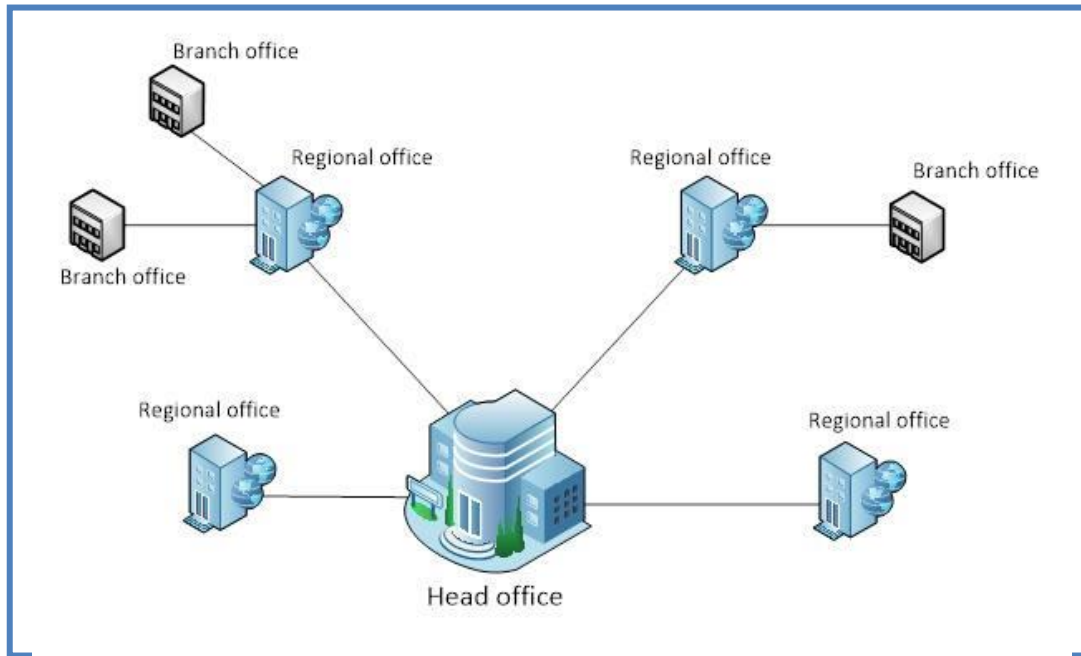
- d. Discuss the main difficulties in implementing IS in small island nations of the Pacific.

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Skill level 4	
4	
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QUESTION C: ICT Infrastructure

1. The diagram below is a logical arrangement of an Information Communication Technology (ICT) infrastructure for a large company. Use the diagram to answer the questions that follow.



- a. Identify the basic IS Infrastructural requirements for most organizations.

Skill level 1	
1	
0	
NR	

- b. Identify common data communication requirements for most organizations.

Skill level 1	
1	
0	
NR	

2. There are so many different types of computer networks use by companies; it can be hard to know the differences between them.

a. Outline the features of a Local Area Network (LAN).

Skill level 2	
2	
1	
0	
NR	

b. Outline the features of a Wide Area Network (WAN).

Skill level 2	
2	
1	
0	
NR	

3. Most software comes with uninstalling feature. Explain the importance of uninstalling software.

Skill level 3	
3	
2	
1	
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Skill level 3	
3	
2	
1	
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c) Discuss the interaction process between a website and its purpose-built database.

[illegible]

Skill level 4	
4	
3	
2	
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QUESTION E: Computer Programming

1. A computer program is what drives a computer. Creating a computer program is known as computer programming.

a) State the purpose of programming.

Skill level 1	
1	
0	
NR	

b) There are different stages involved in programming. Pick **ONE** (1) of the stages and describe its function.

Skill level 2	
2	
1	
0	
NR	

c) Outline the process in designing a program.

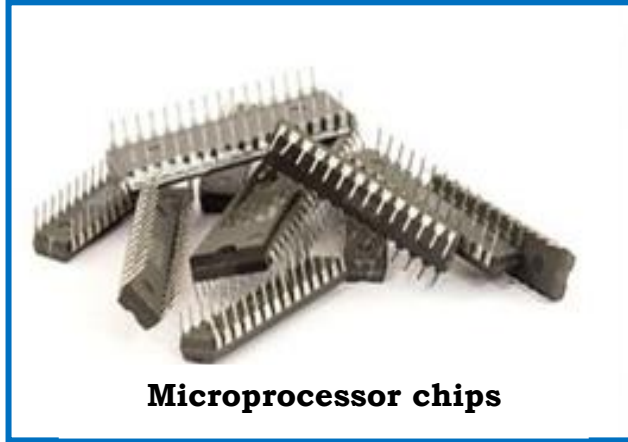
Skill level 2	
2	
1	
0	
NR	

2. State the purpose of testing a program.

Skill level 1	
1	
0	
NR	

QUESTION F: Microprocessor programming

1. Programmable microprocessors can perform the same tasks very accurately and they are found in many digital devices today.



- a) Name a device that is controlled by a microprocessor.

Skill level 1	
1	
0	
NR	

- b) Outline the features of machine code or language.

Skill level 2	
2	
1	
0	
NR	

- c) Describe the features of a programmable (embedded) microprocessor.

Skill level 2	
2	
1	
0	
NR	

- d) Explain how a program written in a high level language is changed into machine code.

Skill level 3	
3	
2	
1	
0	
NR	

QUESTION G: Safe Practices in ICT

1. Computer Safety and Security are major concerns for many organisations around the world. Demonstrate your understanding of the issues relating to Computer Security by answering the following questions.

a) State a threat to ICT systems posed by hackers.

Skill level 1	
1	
0	
NR	

b) State a threat to ICT systems posed by employees.

Skill level 1	
1	
0	
NR	

c) Describe the concerns with Identity theft and other forms of personnel security concerns.

Skill level 2	
2	
1	
0	
NR	

d) Explain key safety standards or guidelines that can be used in ICT by any organisations.

Skill level 3	
3	
2	
1	
0	
NR	

QUESTION H: Social Issues

1. Cyber-crime will continue to be a problem in the Pacific despite the recent development in legislations and security measures.

a) Define cyber-crime.

Skill level 1	
1	
0	
NR	

b) Outline the main components of cyber legislations practiced locally and in many countries.

Skill level 2	
2	
1	
0	
NR	

c) Assess and report major cyber-crimes reported by local authorities or in the Pacific.

Skill level 3	
3	
2	
1	
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NR	

Skill level 4	
4	
3	
2	
1	
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NR	

- c) Suggest protective measures that are used locally or globally to protect the environment from the growing effect of increased use of ICT.

[illegible]

Skill level 3	
3	
2	
1	
0	
NR	