

MARKER CODE


 Pacific
Community
Communauté
du Pacifique


Student Personal Identification Number

South Pacific Form Seven Certificate

INFORMATION AND COMMUNICATIONS TECHNOLOGY

2018

QUESTION and ANSWER BOOKLET

Time allowed: Three hours

(An extra 10 minutes is allowed for reading this paper.)

INSTRUCTIONS

Write your **Student Personal Identification Number (SPIN)** in the space provided on the top right-hand corner of this page.

Answer **ALL QUESTIONS**. Write your answers in the spaces provided in this booklet.

If you need more space for answers, ask the Supervisor for extra paper. Write your SPIN on all extra sheets used and clearly number the questions. Attach the extra sheets at the appropriate places in this booklet.

Major Learning Outcomes (Achievement Standards)	Skill Level & Number of Questions				Weight/ Time
	Level 1 <i>Uni- structural</i>	Level 2 <i>Multi- structural</i>	Level 3 <i>Relational</i>	Level 4 <i>Extended Abstract</i>	
Strand 1: Open Source and Proprietary Software Differentiate between Open Source and Proprietary software, design and develop a product in two or more of the three defined areas of media by using available ICT tools	2	2	1	-	9% 27 min
Strand 2: Ethics of ICT, Environmental Issues, Climate Change, Safe Practices Discuss concepts relating to ICT: piracy, security, copyright, longevity of electronic information storage, and intellectual property, environmental problems generated by the technology; Employ established best practices when interacting with technology.	3	1	2	1	15% 45 min
Strand 3: Programming Demonstrate understanding of programming through the use of appropriate programme languages	4	1	2	-	12% 36 min
Strand 4: Website Design and Development Demonstrate understanding of internet connectivity by designing, developing and testing a website which incorporates data from a purpose built database.	3	1	1	1	12% 36 min
Strand 5: Microprocessor Control Show understanding of the principles of control by programming a microprocessor to sense, measure, record and respond to a parameter of the physical environment	2	2	2	-	12% 36 min
TOTAL	14	7	8	2	60% 180 min

Check that this booklet contains pages 2-13 in the correct order and that none of these pages are blank.

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

STRAND 1: OPEN SOURCE AND PROPRIETARY SOFTWARE*Assessor's use only*

1.1	<p>State one example of a proprietary software used in your school computer lab.</p> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Unistructural</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Unistructural		1		0		NR			
Unistructural												
1												
0												
NR												
1.2	<p>Describe the importance of uninstalling software.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Multistructural</th> </tr> </thead> <tbody> <tr> <td>2</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Multistructural		2		1		0		NR	
Multistructural												
2												
1												
0												
NR												
1.3	<p>Describe how to install software using the default settings.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Multistructural</th> </tr> </thead> <tbody> <tr> <td>2</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Multistructural		2		1		0		NR	
Multistructural												
2												
1												
0												
NR												
1.4	<p>Define graphics card.</p> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Unistructural</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Unistructural		1		0		NR			
Unistructural												
1												
0												
NR												

<p>1.5</p>	<p>Explain how graphics software is used to process either photos, or computer artwork, or scanned pictures, using advanced features of the software.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <tr> <th colspan="2">Relational</th> </tr> <tr> <td>3</td> <td></td> </tr> <tr> <td>2</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </table>	Relational		3		2		1		0		NR	
Relational														
3														
2														
1														
0														
NR														

STRAND 2: ETHICS OF ICT, ENVIRONMENTAL ISSUES, CLIMATE CHANGE, SAFE PRACTICES

Assessor's use only

2.1	<p>Define computer worm.</p> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Unistructural</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Unistructural		1		0		NR			
Unistructural												
1												
0												
NR												
2.2	<p>Define e-waste.</p> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Unistructural</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Unistructural		1		0		NR			
Unistructural												
1												
0												
NR												
2.3	<p>Describe ways computer materials can be recycled.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Multistructural</th> </tr> </thead> <tbody> <tr> <td>2</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Multistructural		2		1		0		NR	
Multistructural												
2												
1												
0												
NR												

2.4

Discuss **two** health issues that are directly related to using ICT equipment and suggest ways these health issues can be reduced. Give examples to support your answer.

Extended Abstract	
4	
3	
2	
1	
0	
NR	

2.5

Differentiate between **malware and Trojan** phishing techniques.

Relational	
3	
2	
1	
0	
NR	

2.6	<p>Define encryption.</p> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <tr> <th colspan="2">Unistructural</th> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </table>	Unistructural		1		0		NR					
Unistructural														
1														
0														
NR														
2.7	<p>Explain the necessity of encryption of hard drives.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <tr> <th colspan="2">Relational</th> </tr> <tr> <td>3</td> <td></td> </tr> <tr> <td>2</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </table>	Relational		3		2		1		0		NR	
Relational														
3														
2														
1														
0														
NR														

STRAND 3: PROGRAMMING*Assessor's use only*

3.1	Define programming . <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Unistructural</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Unistructural		1		0		NR			
Unistructural												
1												
0												
NR												
3.2	Define software . <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Unistructural</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Unistructural		1		0		NR			
Unistructural												
1												
0												
NR												
3.3a	<p>Use the information given below to answer questions 3.3a - 3.3b.</p> <p>The six steps of programming are randomly given below: program design, program code, program specification, program documentation, program maintenance, program test</p> <p>Write the six steps of programming in the correct order.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Unistructural</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Unistructural		1		0		NR			
Unistructural												
1												
0												
NR												
3.3b	Describe any two steps of programming from question 3.3a above. <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Multistructural</th> </tr> </thead> <tbody> <tr> <td>2</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Multistructural		2		1		0		NR	
Multistructural												
2												
1												
0												
NR												

3.4	<p>Program design tools are the tools used to develop a program. During designing a program, different tools are required to solve several problems.</p> <p>Explain how flowchart design tools assist programmers.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Relational</th> </tr> </thead> <tbody> <tr> <td>3</td> <td></td> </tr> <tr> <td>2</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Relational		3		2		1		0		NR	
Relational														
3														
2														
1														
0														
NR														
3.5	<p>Logical structure tools are used in programming.</p> <p>Explain the three logical structures that can be supported by structured programming languages.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Relational</th> </tr> </thead> <tbody> <tr> <td>3</td> <td></td> </tr> <tr> <td>2</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Relational		3		2		1		0		NR	
Relational														
3														
2														
1														
0														
NR														
3.6	<p>Define program testing.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Unistructural</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Unistructural		1		0		NR					
Unistructural														
1														
0														
NR														

STRAND 4: WEBSITE DESIGN AND DEVELOPMENT

Assessor's use only

Use the information given below to answer questions 4.1 – 4.2.

An extract from The University of the South Pacific website is shown below (<http://www.usp.ac.fj>) which contains important information about the services provided by the university.



4.1 Define the term **website**.

Unistructural	
1	
0	
NR	

4.2 Identify the domain name of the website shown above.

Unistructural	
1	
0	
NR	

4.3 A student wants to add the following links while creating a website.

Page 1 : <http://www.education.gov.fj> , Page 2: <http://www.scholarship.edu.au>

Page 3: <http://www.career.ac.nz>

Write simple HTML code for a three-page website.

Multistructural	
2	
1	
0	
NR	

<p>4.4</p>	<p>The html script given below shows how to create a page with a link at the top of it that will jump all the way to the bottom of the page when clicked. At the bottom of the page there is a link that jumps back to the top of the page.</p> <p>Explore the html code and fill in the missing scripts in the blanks.</p> <pre> <html> <body> The top of the page

 <a href=" <input type="text"/> ">Jump to the bottom of the page <p>Some <input type="text"/> text</p> <p>Some text</p> <p>Some text</p> <p>Some text</p> <p>Some text</p> <p>Some text</p> <p>Some text</p> <p>Some text</p> <a href=" <input type="text"/> ">Jump to the top of the page

 <a name=" <input type="text"/> ">The bottom of the page </body> </html> </pre>	<table border="1"> <thead> <tr> <th colspan="2">Relational</th> </tr> </thead> <tbody> <tr> <td>3</td> <td></td> </tr> <tr> <td>2</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Relational		3		2		1		0		NR	
Relational														
3														
2														
1														
0														
NR														
<p>4.5</p>	<p>A student was assigned to test all links in their school website. The student found a broken link or dead link on the webpage.</p> <p>State one reason for the existence of a broken link or dead link.</p> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Unistructural</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Unistructural		1		0		NR					
Unistructural														
1														
0														
NR														

4.6 Several free online website code validation tools are available on the internet such as W3C. The W3C provides multiple tools that conform to and validate against the W3C's latest recommended standards for CSS and HTML.

Explain the **three** methods that you can carry-out to validate complex HTML and CSS code.

Extended Abstract	
4	
3	
2	
1	
0	
NR	

STRAND 5: MICROPROCESSOR CONTROL

Assessor's use only

<p>5.1</p>	<p>Describe how data is processed and stored in the microprocessor.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Multistructural</th> </tr> </thead> <tbody> <tr> <td>2</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Multistructural		2		1		0		NR			
Multistructural														
2														
1														
0														
NR														
<p>5.2</p>	<p>Explain two reasons why hardware cannot function without the software.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Relational</th> </tr> </thead> <tbody> <tr> <td>3</td> <td></td> </tr> <tr> <td>2</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Relational		3		2		1		0		NR	
Relational														
3														
2														
1														
0														
NR														
<p>5.3</p>	<p>Define machine code.</p> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Unistructural</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Unistructural		1		0		NR					
Unistructural														
1														
0														
NR														

<p>5.4</p>	<p>Explain how a program written in a high level language is converted into machine code.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Relational</th> </tr> </thead> <tbody> <tr> <td>3</td> <td></td> </tr> <tr> <td>2</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Relational		3		2		1		0		NR	
Relational														
3														
2														
1														
0														
NR														
<p>5.5</p>	<p>Define dedicated microprocessor.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Unistructural</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Unistructural		1		0		NR					
Unistructural														
1														
0														
NR														
<p>5.6</p>	<p>Describe a suitable output response from a microprocessor when critical change has occurred in its environment.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<table border="1"> <thead> <tr> <th colspan="2">Multistructural</th> </tr> </thead> <tbody> <tr> <td>2</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>NR</td> <td></td> </tr> </tbody> </table>	Multistructural		2		1		0		NR			
Multistructural														
2														
1														
0														
NR														