

STUDENT EDUCATION NUMBER									



## Sāmoa Secondary Leaving Certificate

# COMPUTER STUDIES 2016

### QUESTION and ANSWER BOOKLET

Time allowed: Three Hours & 10 Minutes

#### INSTRUCTIONS

1. You have 10 minutes to read **before** you start writing.
2. Write your **Student Education Number (SEN)** in the space provided on the top right hand corner of this page
3. **ALL Strands are compulsory.** Write your answers in the spaces provided in this booklet.
4. 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.

STRANDS	Page number	Time (minutes)	Weighting
1. Computer Systems	2	45	25
2. Fundamentals of Computer Programming	6	27	15
3. Word Processing, Spreadsheets & Databases	9	108	60
<b>Total</b>		<b>180</b>	<b>100</b>

**CHECK!** This booklet contains pages 2-21 in the right order.

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

**STRAND 1:**

**Computer Systems**

**Weighting 25**

**Instruction: Write your answers clearly in the spaces provided.**

1. State why a technician may need to insert an expansion slot to a system unit.

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Skill Level 1

2. List any TWO types of printers.

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Skill Level 2

3. A technician explained to Mary why she cannot view pictures on her personal computer. If you were the technician, explain the problem and the solution so that Mary can view pictures on her computer.

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Skill Level 3

4. Name the operating system used to provide ways to allocate portions of memory to programs at their request, and free it for reuse when no longer needed.

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Skill Level 1

5. One of the functions of an XP Operating System is maintaining the file system. Briefly explain another function of an Operating System. Give an example.

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Skill Level 3

6. Data compression squeezes data so it requires less bandwidth on a data transmission channel. List the two important compression concepts.

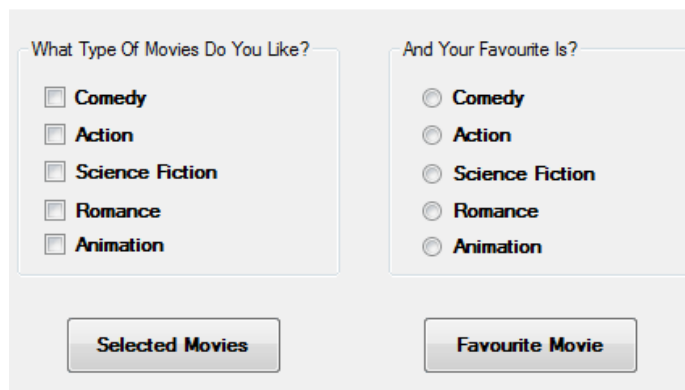
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Skill Level 2

**Use diagram below to answer Number 7.**



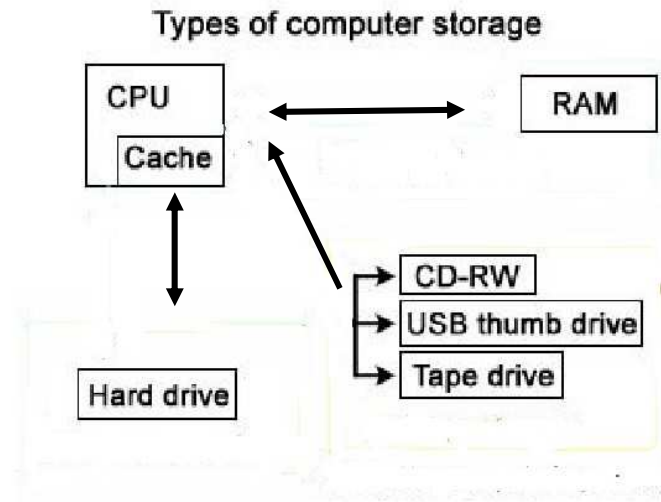
7. Name a GUI element used to design the survey above.

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Skill Level 1

Use diagram below to answer Number 8.



8. There are 3 types of storage media presented on the above graphic. On the diagram above, circle an example of a Secondary storage.

Skill Level 1

9. Evaluate the needs for computer systems to be protected against computer viruses using appropriate anti-virus software.

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Skill Level 4

10. Analyze with careful observation on the changing nature of work and enterprises due to the availability of virtual office. Provide an example.

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Skill Level 3

11. Discuss an ethical issue and propose a solution to solve the issue faced by a virtually impaired computer user.

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Skill Level 4

**STRAND 2:**

**Fundamentals of Computer Programming**

**Weighting 15**

1. Define the term *logic flow chart*

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Skill Level 1

**String name;  
Name = "Maria";**

2. Use the two lines above extracted from a program to identify a variable.

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Skill Level 1

3. Joan is tutoring her class about flow charts. Help Joan by drawing up the different symbols of a logic flow chart applicable to the different scenarios used.

a. Draw the **symbol** used to represent an action that is to be taken place.

Skill Level 1

b. Draw the **symbol** that will show a relationship between the representative steps.

Skill Level 1

c. Joan has reached the last step for one task; which was to 'Click Print Button'. Show the **symbol** used to indicate this step for her flowchart.

Skill Level 1

d. Joan wanted to display the result of adding three numbers. Show the **symbol** to indicate this step.

Skill Level 1

e. Draw the **symbol** used to indicate a decision has been considered for a condition.

Skill Level 1

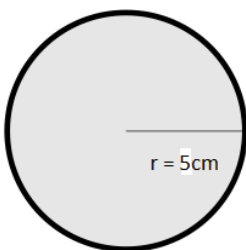
4. Joan provided two options to check whether a printer device has been connected or not. If the printer is **NOT** connected, then user should choose to check cables, or else user will be asked to select printer if the answer is **YES**. Draw the *logic flowchart* used to show this step.

Skill Level 3

5. Design a flow chart with the symbols to produce a solution for adding any 2 numbers less than 10. Include a condition if the sum is more than 50% of the sum, then print "Pass" otherwise show "Fail".

Skill Level 3

6. Use the information below to assign and declare a **constant data type**.  
Area =  $\pi \times r^2$  where  $\pi = 3.14$  and  $r = 5\text{cm}$ . (Hint: Use the Pi value)



$$A = \pi r^2$$

Skill Level 2



**STRAND 3:**

**Word Processing, Spreadsheet and Database**

**Weighting 60**

1. Define the terms:

a. *Text processor*

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Skill Level 1

b. *Document processor*

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Skill Level 1

2. Name a principle of word-processing

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Skill Level 1

3. Define the concepts of word wrapping when used in word processing.

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Skill Level 1

Passage:

*ICT is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular, phones. Computer and network hardware and software..etc, as well as the various services and applications.*

4. In the passage above, **name** and **define** the font style that was applied to the passage.

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Skill Level 1

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5. Explain with an example what mail merge is and how it is used in word-processing.

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Skill Level 3

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6. A general passage or word placed at the top of a page displayed repeatedly in every pages is called :

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Skill Level 1

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7. IQM

The letter T was typed at the point where the cursor was blinking to be read as **ICT**. Which mode of insertion was currently on?

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Skill Level 1

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8. Information ~~Communication~~ Technology

The font effect applied to the text *Communication* above is:

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Skill Level 1

9. Explain with an example how the features **headers and footers** are used to format any document.

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Skill Level 3

Use the spreadsheet to answer Number **10a** to **10h**.

	A	B	C	D	E	F	G	H	I	J
1	<b>YEAR 10 RESULTS</b>									
2			<b>STUDENT NAME</b>	<b>TEST 1</b>	<b>TEST 2</b>	<b>TEST 3</b>		<b>TOTAL MARKS</b>	<b>TOTAL %</b>	<b>RESULT</b>
3				40	40	50		130	100%	PASS / FAIL
4		1	Kinona Salā	23	12	22		57	44%	FAIL
5		2	Ata Perrie	25	31	38		94	72%	PASS
6		3	Leilani Knox	5	15	18		38	29%	FAIL
7		4	Sione Jackson	6	12	19		37	28%	FAIL
8		5	Annie Folau	34	32	42		108	83%	PASS
9		6	Kinai Alesana	18	20	31		69	53%	PASS
10	No of students									
11	Highest Total									
12	Lowerst Total									
13										

10a. Name the type of data entered in cell **D3**.

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Skill Level 1

10b. Write a formula entered in **coloumn H**. (Do not give a function).

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Skill Level 1

10c. **C10, C11** and **C12** are empty. Write the functions that should be entered in these cells as well as the numbers that would appear as a result of these entries.

C10 Function: \_\_\_\_\_ Result: \_\_\_\_\_

Skill Level 2

C11 Function: \_\_\_\_\_ Result: \_\_\_\_\_

C12 Function: \_\_\_\_\_ Result: \_\_\_\_\_

10d. List steps to delete column G.

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Skill Level 2

10e. A formula given below was entered in cell **I4**. Insert the right type of cell references to the fomula that was used to create the right answer when copying the formular from cell **I4** down to cell **I9**

**= 57 (H4) multiply by 100% (I3) divide by 130 (H3) (Hint: Use absolute reference)**

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Skill Level 3

10f. Show by plotting the data found on **column C** (Student name) and **column D** (Test 1) on a column chart. Provide appropriate labels to the axes.

Skill Level 4

10g. Name the key on the keyboard used to select column **C** and column **J** at the same time.

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Skill Level 1

10h. While the two columns are still been selected in the above question, what will show on the printed paper if **Print Active Sheets** is selected to print?

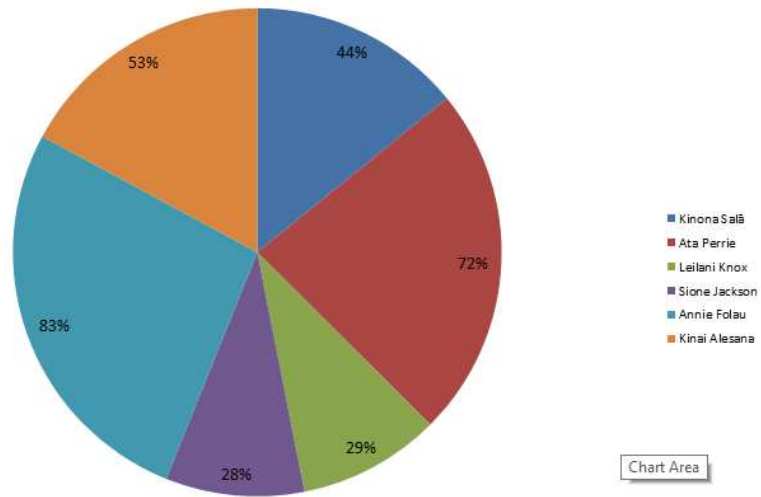
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Skill Level 1

Use the chart to answer Number11



11. Provide the columns used to display the chart above

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Skill Level 1

12. List the advantages of using a spreadsheet.

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Skill Level 2

13. Name and describe the type of reference given.

**\$A\$1**

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Skill Level 2

Study the diagram below to answer Questions 14a to 14f

ID	Name	Age	Date of Birth	Salary	Department
AA1010	Thomas Foai	37	03-Dec-78	\$35,673.00	Administration
AA1020	Filipo Pelesasa	34	05-Nov-82	\$21,680.00	Administration
AB1030	Enoka Sean	35	26-Mar-75	\$24,681.00	Finance
AB1040	Lord Kekoa	29	02-Jan-87	\$20,400.00	Finance
AB1050	Kimberly Read	23	22-Sep-93	\$19,350.00	Finance
AC1040	Bond Talavou	34	16-Oct-82	\$28,945.00	Marketing
AC1050	George Kinai	29	26-Apr-87	\$33,610.00	Marketing
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14a. How many fields are there?

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Skill Level 1

14b. Name an appropriate data type for **ID**

**ID** : \_\_\_\_\_

Skill Level 1

**SELECT Name, Department  
FROM NewStaff  
WHERE Salary > 25000;**

14c. How many records will be displayed as a result of the above query?

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Skill Level 1



14d. Modify the query given in question (14c) to display the names and the departments of the staff from the NewStaff table who are earning between \$22000 and \$32000.

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Skill Level 1

14e. State the fields displayed as a result of the above query in (14d).

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Skill Level 1

14f. If the database was sorted by **Age** in an **ascending** order, what would be the second field appear on the **Name** column. Give just the Name

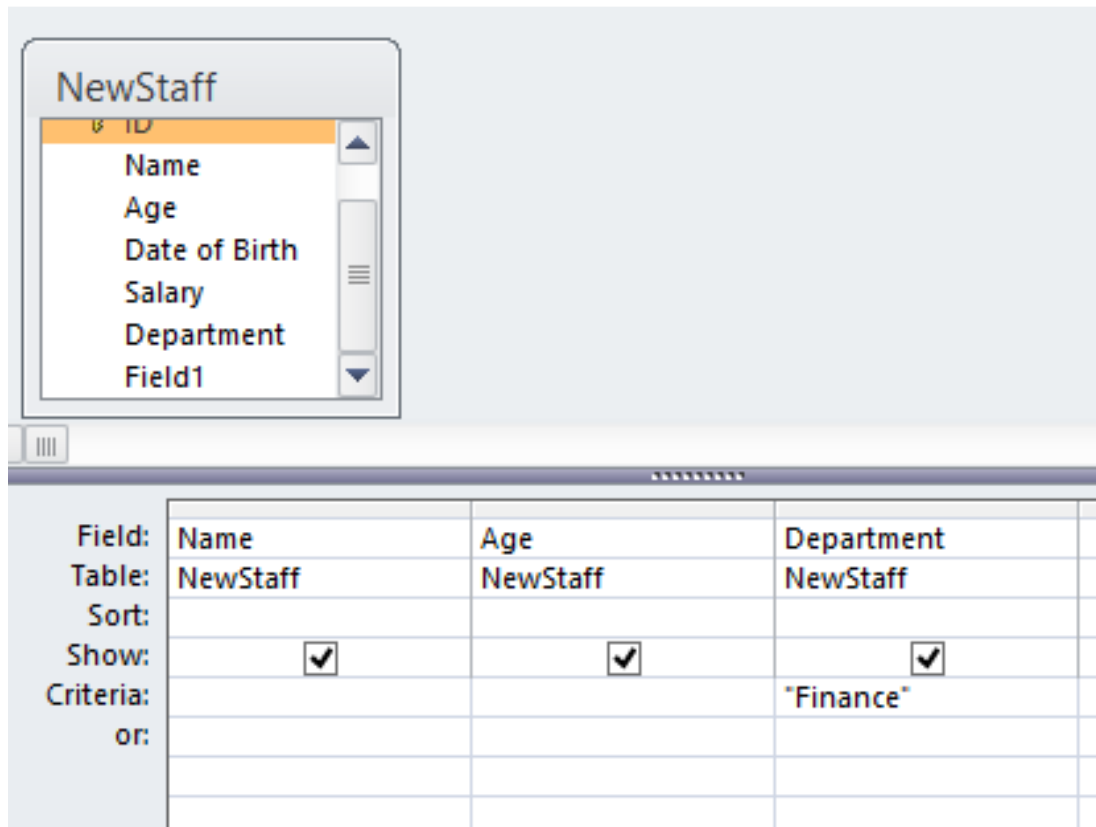
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Skill Level 1

Use the diagram below to answer Number 15.



15. Fill in the following table to show the result for the query above.


Skill Level 2

Use diagram below to answer questions 16a to 16f.

Reg#	FName	LName	Gender	Age	Program	Group#
1	Dana	Vaea	F	10	Science	A1
2	Tevani	Perry	F	11	Art	A2
3	Taofi	Siaosi	M	10	Science	A3
4	Alfred	Toloa	M	11	Commerce	A1
5	Maxine	Falo	F	11	Commerce	A2
6	Sio	Sasa	M	10	Science	A3
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16a. Assign appropriate data types that was used for **Reg#**, **FName**, **Gender** and **Age**.

Field Name	Data Types

Skill Level 2

16b. List a practical way in which you can ensure there is a consistency of data entry to the field Gender.

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Skill Level 2

16c. The database was created on a DBMS. Explain what a DBMS is and provide advantages of using a database over a spreadsheet.

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Skill Level 3

16d. Construct an SQL query to find the Average of the class age.

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Skill Level 3

16e. Write an **SQL** statement to display the First Name, Last Name and Age of the Science students only.

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Skill Level 4

- 16f. Generate a query to show the First Name and Group numbers of **the female students** only by filling in the following window.

<b>Field :</b>				
<b>Table:</b>				
<b>Sort :</b>				
<b>Show:</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Criteria:</b>				
<b>Or</b>				

Skill Level 4