STUDENT EDUCATION NUMBER									

GOVERNMENT OF SAMOA
MINISTRY OF EDUCATION, SPORTS AND CULTURE

Samoa Secondary Leaving Certificate

COMPUTER STUDIES

2017

QUESTION and ANSWER BOOKLET

Time allowed: 3 Hours & 10 minutes

INSTRUCTIONS

1. You have 10 minutes to read **before** you start the exam.
2. Write your **Student Education Number (SEN)** in the space provided on the top left hand corner of this page.
3. **Answer ALL QUESTIONS.** Write your answers in the spaces provided in this booklet.
4. If you need more space, 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.

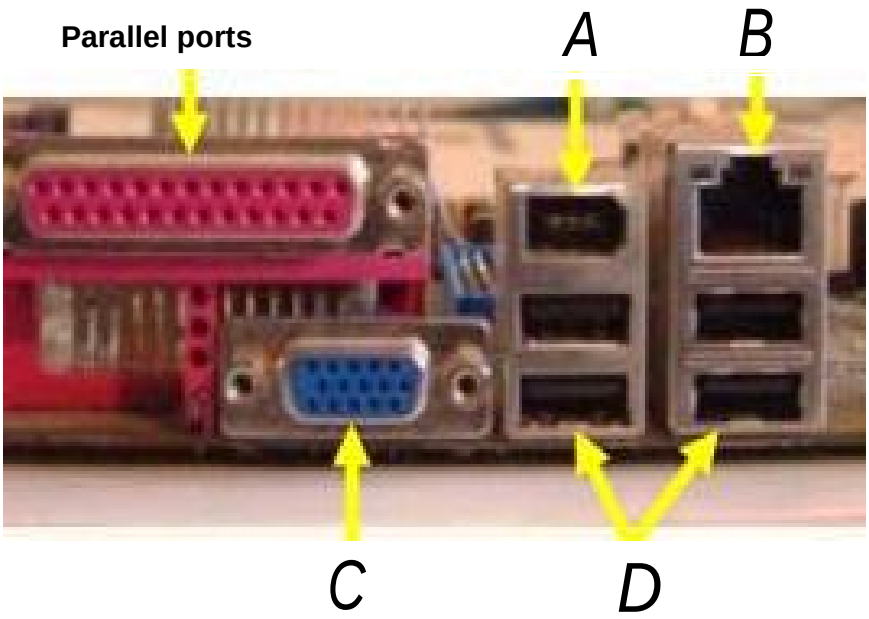
CURRICULUM STRANDS		Page	Time (min)	Weighting
STRAND 1:	COMPUTER SYSTEMS	2	54	25
STRAND 2:	FUNDAMENTALS OF COMPUTER PROGRAMMING	6	45	15
STRAND 3:	WORD PROCESSING, SPREADSHEETS & DATABASES	9	81	60
TOTAL			**180**	**100**

Check that this booklet contains pages 2-21 in the correct order and that none of these pages are blank.

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

Write your answers clearly in the spaces provided.

1. Use the diagram below to answer Number 1 (a – e).



(a) Describe the port labelled **A** in the diagram above.

SL 2

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(b) Name the card to be used for the port labelled **B**.

SL 1

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(c) Explain the functions of a PC gained when taking full advantage of the expansion slot for port labelled **B** on the diagram.

SL 3

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(d) Port labelled (C) is a Video Graphics Array (VGA) port which holds a 15-pin, D-sub miniature style and is usually located at the back or side of a laptop, computer or the back of a desktop system. Name any peripheral device your PC can use to connect through this VGA port.

SL 1

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_____

(e) Name the ports labelled **D**.

SL 1

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_____

2. Elisa received a picture of the beach she wanted to visit in Samoa. Name the program with which the specified file can be opened.

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_____

SL 1

3. Describe any feature of a ROM (Read Only Memory) used by the operating system.

SL 2

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4. Sketch an example of a Graphical User Interface icon and explain how its elements make program user friendly.

SL 3

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5. Explain and provide an example of an anti-virus software.

SL 3

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6. Evaluate the need for appropriate anti-virus software to protect computer systems against computer viruses.

SL 4

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7. Discuss the advantages of having computer programmers in the ICT field. Give examples.

SL 4

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STRAND 2: FUNDAMENTALS OF COMPUTER PROGRAMMING Weighting 15

1. The algorithms for the activities (i) and (ii) have been provided for you. Insert the symbols/shapes of a flow chart to match the steps for each activity.

(i) Making tea

a. Start
b. Fill kettle
c. Heat water
d. Water boiled?
e. Make tea
f. Stop

a) Process

SL 1

b) Line connector

SL 1

c) Decision

SL 1

(ii) Adding two numbers and show result

a. Start
b. Input x, Input y
c. Sum=x+y
d. Output Sum
e. End

d) Start/End

SL 1

e) Input/output

SL 1

2. Define a variable you can use for your age.

SL 1

_____

_____

_____

3. Use an example to define the datatype Constant.

SL 1

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4. List at least TWO features of a good computer program.

SL 2

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5. Write a suitable algorithm to show steps for brushing your teeth.

SL 3

6. With the assistance of the image ‘Sprim’; draw a logic flow chart to show how to mix a sprim drink. Provide symbols and shapes to show each step and include a decision that has been made during the process.

SL 3

STRAND 3: WORD PROCESSING, SPREADSHEET AND DATABASE Weighting 60

1. Define the terms given below:

(a) *Document processor.*

SL 1

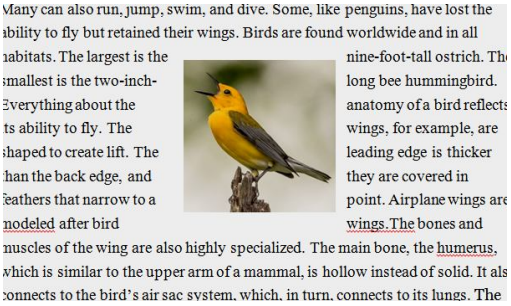
(b) *Fixed spacing fonts.*

SL 1

(c) *Serif fonts.*

SL 1

2. Use the picture to answer Questions (a) to (c).


Many can also run, jump, swim, and dive. Some, like penguins, have lost the
ability to fly but retained their wings. Birds are found worldwide and in all
habitats. The largest is the nine-foot-tall ostrich. The
smallest is the two-inch- long bee hummingbird.
Everything about the anatomy of a bird reflects
its ability to fly. The wings, for example, are
shaped to create lift. The leading edge is thicker
than the back edge, and they are covered in
feathers that narrow to a point. Airplane wings are
modeled after bird wings. The bones and
muscles of the wing are also highly specialized. The main bone, the humerus,
which is similar to the upper arm of a mammal, is hollow instead of solid. It also
connects to the bird's air sac system, which, in turn, connects to its lungs. The

(a) State/Name the word-processing concept that was used to construct the picture so that the text can move along and around the picture.

SL 1

(b) **San Serif** was applied to the text font. Define the term **San Serif**.

SL 1

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(c) List TWO types of documents you can create, edit, format and print using a word processing program.

SL 2

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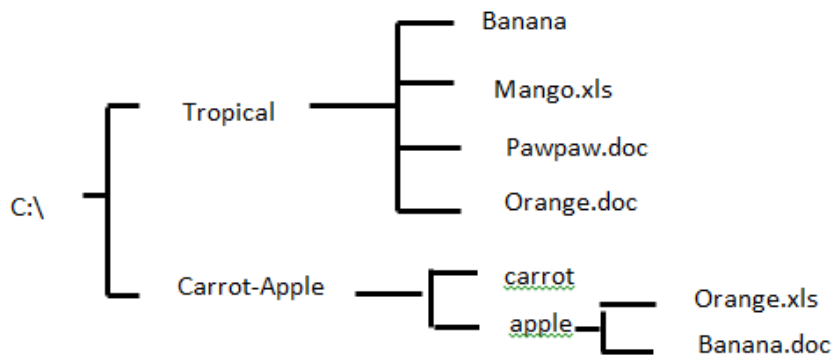
3. Re-draw the hierarchy below to include the changes (x) to (z).



x – Copy file Banana.doc in Banana folder
y – Move the word document file name Orange in the carrot folder
z – Rename Pawpaw.doc to Papaya.doc

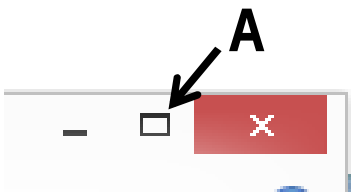
SL 2

4. MEST

The letter **C** was typed at the point where the cursor was blinking. Write the full word if the overtype mode is active.

SL 1

5.



Name the command icon labelled '**A**'.

_____

_____

SL 1

6. Use the empty **Table 2** template to reformat the data found in **Table 1** to match the editor's comments.

Editor's comments

a. Apply center tab to the left column
b. Apply decimal tab to the right column
c. Apply 'All Case' to title (1st Row" of the table)

Table 1:

Smoothies	
Apple juice	$22.30
Papaya	$5.50
Coconut shell	.20

Tabulation

SL 3

Table 2:

Case Change

SL 1

7. Discuss with an example how people in work places are empowered by word processing skills.

SL 4

8. Use the spreadsheet below to answer Questions (a) to (j).

	A	B	C	D	E
1	KI-SHACK MEGA SALE				
2	ITEMS	PRICE	DISCOUNT PRICE	NEW PRICE	Sale
3	laptop	$1,500.00	$ 75.00	$1,425.00	NO
4	flat screen	$2,500.00	$ 125.00	$2,375.00	YES
5	sofa bed	$1,600.00	$ 80.00	$1,520.00	NO
6	office chair	$1,200.00	$ 60.00	$1,140.00	NO
7	dining table	$2,800.00	$ 140.00	$2,660.00	YES
8			TOTAL		
9			MOST EXP		
10	DISCOUNT	5%	CHEAPEST		

(a) Name the shaded cell.

SL 1

(b) Write the formula that was used to calculate cell C3 if Discount Price = Price multiplied by 5% discount. (absolute reference was used and formula was copied to the rest of the Discount Price column.)

SL 2

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(c) Write the formula that was used for cell D3 when Discount Price was less from Price.

SL 1

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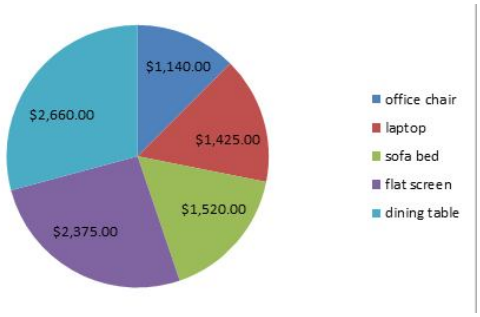

(d) Name the TWO column headings of the data extracted to form up the given chart.

SL 1

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_____

_____

(e) List the functions used to calculate cells D8, D9 and D10.

SL 2

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_____

_____

_____

(f) Calculate answers for cells D8, D9 and D10 using the functions assigned in Question 8(e).

SL 3

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_____

_____

(g) D8 can also be found by using formula: D3 + D4 + D5 + D6 + D7. Write another way of writing the formula to practice data integrity on the source used for calculation.

SL 1

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_____

_____

(h) Write the IF function argument or formular to calculate cell E3 if the discount price is more than $100.00, then display the word “YES”, But if discount price is less than $100.00, then display the word “NO”.

SL 3

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_____

(i) If the spreadsheet was sorted in descending order of **New Price**, state the first value for the **items** column.

_____

_____

_____

_____

SL 2

(j) State any type of paper orientation you prefer the worksheet to show on a printed paper.

_____

_____

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SL 1

9. Table 1 provides the Employees table and Table 2 shows properties applied to some of the Employee table's fields.

Use the information from the 2 tables below to answer Questions (a) to (g).

Table 1:

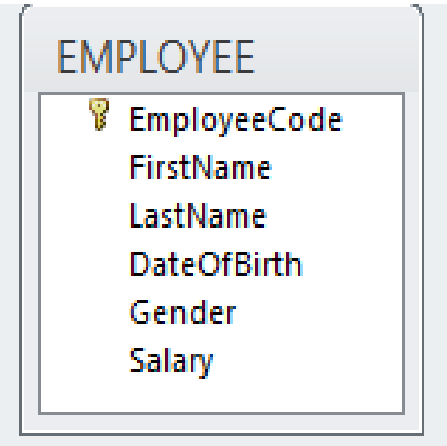
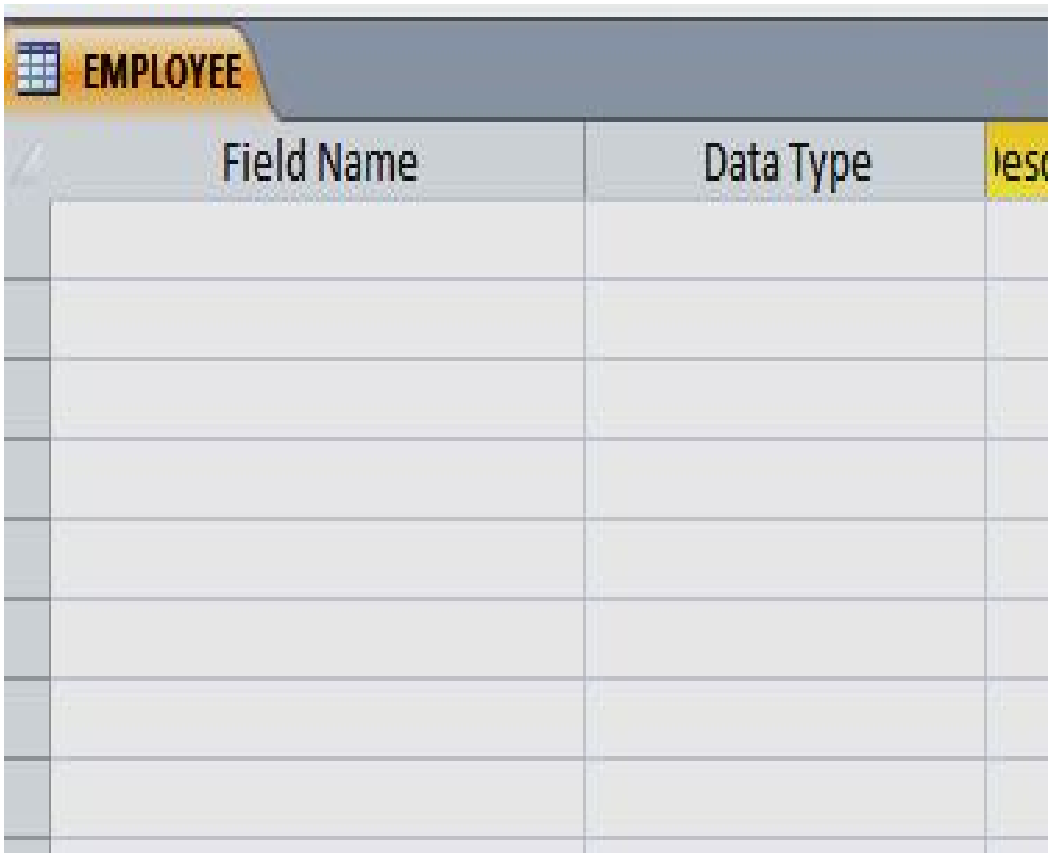


Table 2:

FIELD	FIELD PROPERTIES
EmployeeCode	Size – 30
DateOfBirth	Caption – Birthdate
Gender	Validation Rule – Female or Male Validation Text – Enter Male or Female

(a) Design the Employee's table by filling the Field Names and the Data Type.

SL 2



(b) Fill in the field names on a datasheet view. One field has been done for you.

SL 1

Field Names

	EmployeeCode					

(c) Use the properties assigned to the datasheet to make up and enter one line of records for the Employees table.

[**Note:** apply the properties to the fields].

SL 1

	EmployeeCode					

(d) Provide an example from the Employee's table to show a practical way in which one can ensure the consistency and accuracy of data entry.

SL 2

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(e) Create an SQL statement to show the first and last names of all female Employees.

SL 4

(f) Write a query to show the Employees code, with their salary **ONLY**. Also include in the query the employees last name and birthdates and sort data in descending order by employees last names.

SL 4

Field :				
Table:				
Sort :				
Show:	☐	☐	☐	☐
Criteria:				
Or				

10. Study the diagram below to answer Questions (a) to (e).

CarDetails

NumberPlate	Type	Model	Year	DateOfMembership	Status
101008	Honda	Sedan Cevic	2003	14-Aug-17	in
101011	Toyota	Hiace Van	2005	10-Aug-17	out
101013	Nissan	Sedan Sunny	2005	04-Aug-17	in
101015	Honda	Sedan Accord	2005	27-Aug-17	in
101044	Nissan	Serena	2005	30-Jul-17	out
101058	Nissan	Sedan Bluebir	2004	17-Aug-17	out
101062	Mazda	Sedan Jax	2005	31-Aug-17	in

(a) After running the SQL query below, how many Nissan type cars are expected to show in the result.

```
SELECT Type, Model, Year
FROM CarDetails
WHERE Status = “out”;
```

SL 1

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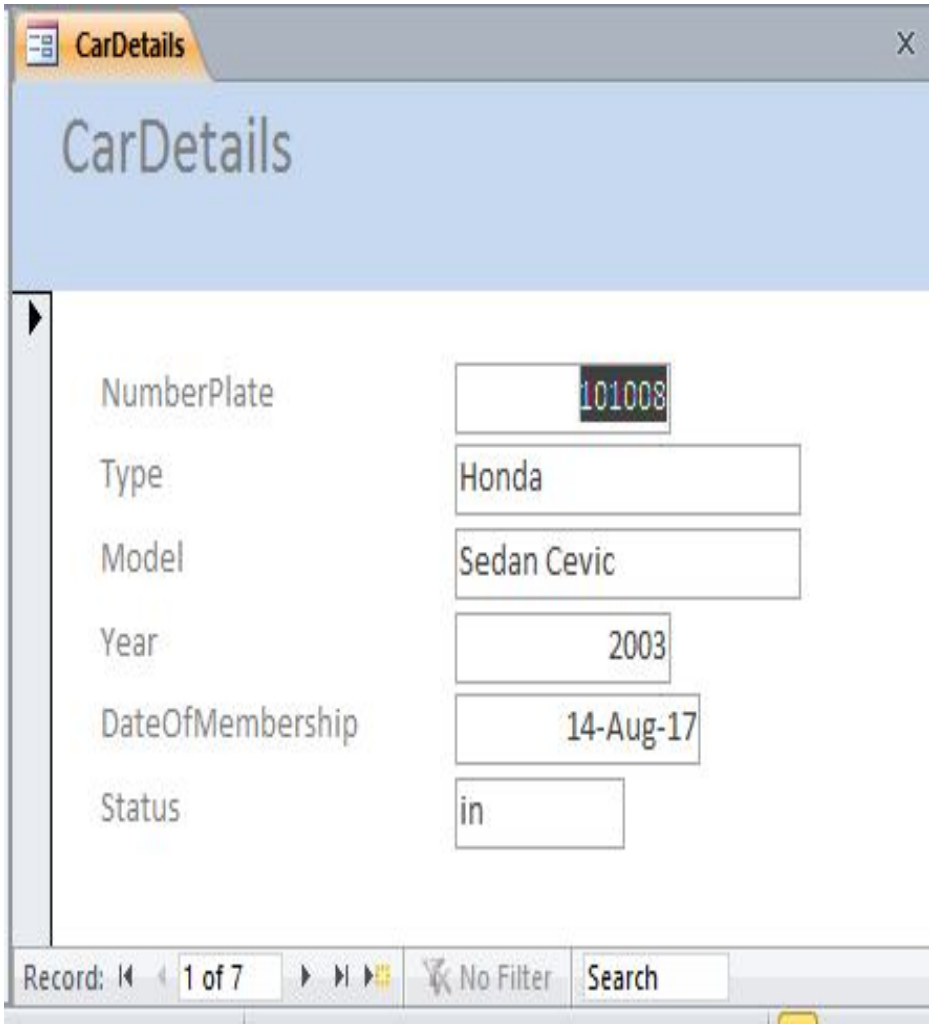
(b) A form was used to add new records. Circle the button used to insert a new record.

SL 1



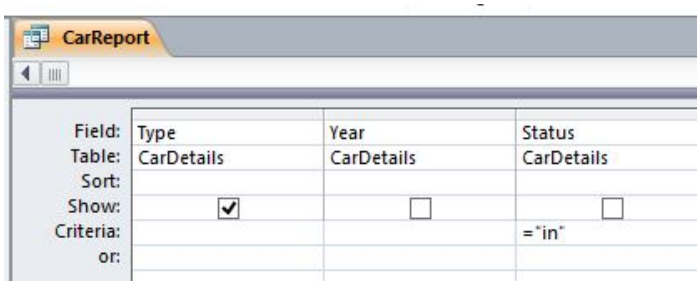
(c) If the database was sorted by their **Models** in ascending order, what would be the last entry read in the **Number Plate** column.

SL 1

_____

_____

(d) A report to show the query result has been generated. Write the output of this report based on the following criterias.



SL 1

(e) Construct an SQL query to count the number of rows in the previous task.

SL 3

11. Explain with an example the advantages of using a database.

SL 3

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STUDENT EDUCATION NUMBER									

COMPUTER STUDIES

2017

(For Scorers only)

CURRICULUM STRANDS	Weighting	Scores	Chief Scorer
STRAND 1: PRODUCTION	25		
STRAND 2: CONSUMPTION	15		
STRAND 3: MARKET	60		
TOTAL	**100**		