

Candidate Name: _____

Centre Number			Candidate Number							

EXAMINATIONS COUNCIL OF ZAMBIA

Examination for General Certificate of Education Ordinary Level

Computer Studies

7010/1

Monday

25 JULY 2016

Candidates answer on the question paper

No additional materials are required

Time: 2 hours 30 minutes

Instructions to candidates

Write your name, centre number and candidate number in the spaces at the top of this page.

There are **13 questions** in this paper. Answer **all** questions.

Write your answers in the spaces provided on the question paper.

Information for candidates

The number of marks is given in brackets [] at the end of each question or part question.

Cell phones are not allowed in the Examination Room.

FOR EXAMINER'S USE

1 Explain the meaning of the following computer terms using examples where necessary;

- (a) Auto correct.....
.....
..... [2]
- (b) Arithmetic Logic Unit.....
.....
..... [2]
- (c) Primary storage.....
.....
..... [2]
- (d) Smart Phone.....
.....
..... [2]
- (e) Desktop.....
.....
..... [2]
- (f) Log off ,.....
.....
..... [2]

2

- (a) State **two** advantages of using data stored on a hard disk rather than data stored on a magnetic tape.

Advantage 1.....
..... [1]

Advantage 2.....
..... [1]

- (b) Give **two** advantages of removable secondary storage devices.

Advantage 1.....
..... [1]

Advantage 2.....
..... [1]

- (c) Give **two** reasons why the system software of a computer is stored in the Read Only Memory (ROM).

Reason 1
..... [1]

Reason 2
..... [1]

- (d) Give **one** example of storage media which is read-only apart from the Read Only Memory (ROM).

..... [1]

3

An air travel agent makes flight bookings for customers around the capital city. The bookings are made using an on-line booking system. The system is interactive.

(a) What is meant by the system being interactive?

.....
..... [2]

(b) Give **two** other examples of an interactive system.

Example 1..... [1]

Example 2..... [1]

(c) When the operator makes a booking, the system queries a central remote database. Give **two** reasons why flight bookings are made on central databases.

Reason 1 [1]

Reason 2 [1]

(d) What is the name given to the type of processing that takes place in the booking system?

..... [1]

(e) Give **two** other examples that work like air-line booking systems.

Example 1..... [1]

Example 2..... [1]

4

Trading in goods and services has been popularised with the increase in access to the Internet.

(a) What is the term used to describe the trading of goods and services using the Internet?

..... [1]

(b) Give **two** benefits of trading on the Internet to the

(i) seller

Benefit 1

[1]

Benefit 2

[1]

(ii) buyer

Benefit 1

[1]

Benefit 2

[1]

(c) State **two** disadvantages of trading using the Internet.

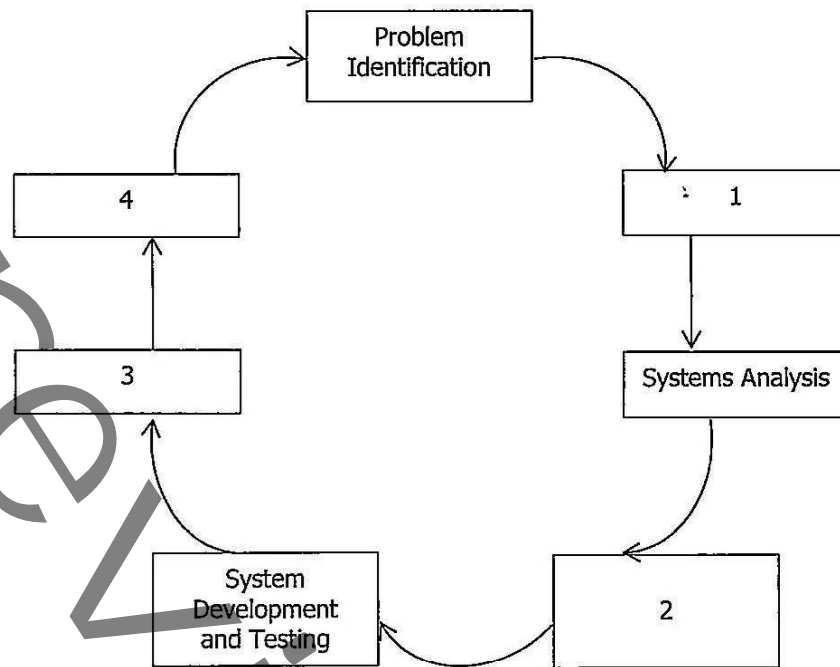
Disadvantage 1

[1]

Disadvantage 2

[1]

- 5 Study the diagram below and answer the questions that follow.



- (a) What is the purpose of the process shown?
 [1]
- (b) Name the stages marked by the numbers.
 1 [1]
 2 [1]
 3 [1]
 4 [1]
- (c) State **three** types of tests carried out during the System Development and Testing stage.
 Test type 1 [1]
 Test type 2 [1]
 Test type 3 [1]
- (d) List **two** activities that are done in the Systems Analysis stage.
 Activity 1 [1]
 Activity 2 [1]

6

Many organisations including schools have set up their computer networks as Intranets.

(a) (i) What is the difference between an Intranet and the Internet?

.....
 [2]

(ii) Describe **two** benefits of an Intranet to a school.

Benefit 1 [1]

Benefit 2 [1]

(b) State **two** precautions that a user should take when accessing files on the Internet.

Precaution 1 [1]

Precaution 2 [1]

(c) Give **one** advantage of the Internet over an Intranet.

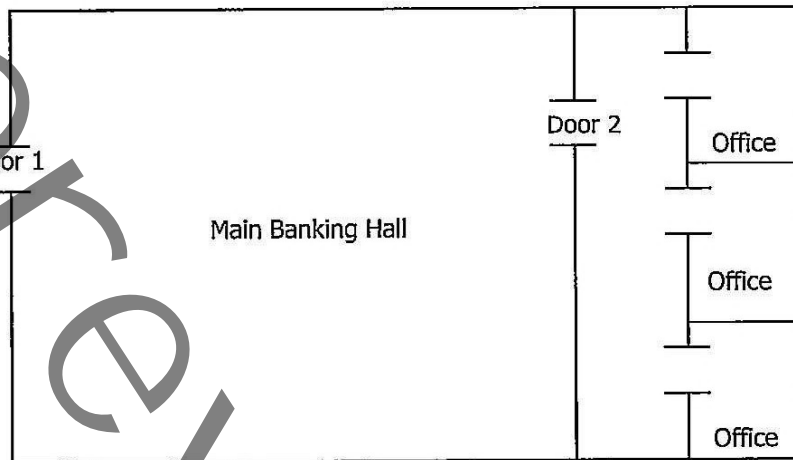
..... [1]

(d) Describe **two** security measures used on an Intranet.

Measure 1 [1]

Measure 2 [1]

- 7 A bank has two security doors used to control access to its premises. Door 1 is the entrance to the main banking hall and opens automatically as any one approaches. Door 2 gives access to offices for staff only and requires entrance rights to open. Use the illustration below to answer questions that follow.



- (a) Name **two** sensors that can be used at door 1.
- Sensor 1 [1]
- Sensor2 [1]
- (b) (i) Describe briefly the process that takes place in order for door 1 to open.
-
-[2]
- (ii) Give **one** item in the entrance rights required for door 2 to open.
-
-[1]
- (c) Give **two** advantages to the bank of using a microprocessor controlled security door.
- Advantage 1.....
- [1]
- Advantage 2.....
- [1]
- (d) State **one** disadvantage of microprocessor controlled security equipment.
- [1]

8

Ngwangwa Finance Company keeps records of its creditors in a spreadsheet. An extract of one of the records kept is shown below. Use this extract to answer the questions that follow.

	A	B	C	D	E
1	CREDITOR	AMOUNT		CREDITOR	TOTAL
2	CHALI	60		AKA	140
3	MOONGA	90		CHALI	
4	AKA	70		MAUNGA	
5	MOONGA	110		MOONGA	
6	MAUNGA	80			
7	AKA	50			
8	MAUNGA	100			
9	AKA	20			

- (a) If the total credit for AKA entered at E2 was calculated by the function = Sum if (A2 : A9, "AKA", B2 : B9), write the function that can be entered at E3.
 [2]
- (b) Describe another way that can be used to add up the total amount for each creditor.

 [2]
- (c) Give **one** validation method that can be used to restrict the amount of credit allowed to each customer.
 [1]
- (d) Describe how you can create a graph for creditor subtotals.

 [2]

9 Computer systems are very important in the running of supermarkets and other stores. Sometimes computers at these stores develop problems.

(a) Give **two** problems that may cause a computer to malfunction.

Problem 1 [1]

Problem 2 [1]

(b) Describe **two** effects of system failure to the supermarket business.

Effect 1 [1]

Effect 2 [1]

(c) Describe **one** way of recovering lost data on the Supermarket's Computer System.

..... [2]

10

Databases kept by organisations are usually linked. Study the linked database tables below and answer the questions that follow.

PRODUCT

PRODUCT	DESCRIPTION	PRICE
PO1	SALT	30
PO2	SUGAR	20
PO3	RICE	15

CUSTOMER

CUSTOMER	PRODUCT	QTY
CO1	PO3	100
CO2	PO2	50
CO3	PO3	60
CO4	PO1	70

**ORDER QUERY**

CUSTOMER	PRODUCT	DESCRIPTION	PRICE	QTY	AMOUNT
CO1					X
CO3					Y

- (a) Give **one** reason for having the table relationship.

..... [1]

- (b) AMOUNT in the order query is a calculated field defined by,

AMOUNT: [QTY] * [PRICE].

Using this formula, find the value for X and Y in the AMOUNT field.

X [1]

Y [1]

- (c) Give **one** of the conditions necessary for the two tables to be related.

..... [2]

- (d) Explain how similar records can be extracted from a database table.

..... [2]

- (e) What feature is used to extract records in a database?

..... [1]

11 A company has invested in computer systems to help carry out the following tasks:

- advertise products (both on the internet and paper leaflets),
- keep track of customers and staff contact details,
- produce online products on offer,
- produce reports to management.

Describe **four** software packages the company could use to carry out the above tasks and give a reason why each software package has been chosen.

Package 1..... [1]

Reason..... [1]

Package 2..... [1]

Reason..... [1]

Package 3..... [1]

Reason..... [1]

Package 4..... [1]

Reason..... [1]

- 12 The algorithm below was written to calculate tax for five employees at Jumulo Internet Cafe.

```

Count = 0
WHILE count ≤ 5
    Input salary
    IF salary > 3 000 THEN tax = salary × 0.20
    ELSE if salary > 4 500 THEN tax = salary × 0.25
    ELSE if salary > 7 000 THEN tax = salary × 0.40
    ELSE tax = 0
    ENDIF
    ENDIF
    ENDIF
    print tax
    count = count + 1
ENDWHILE

```

- (a) How many tax bands (tax range) is the program using to calculate tax?
..... [1]
- (b) Write the output if the following salaries are entered.
- (i) 2 700..... [1]
- (ii) 4 200..... [1]
- (iii) 12 700..... [1]

13 A hotel offers a virtual tour of its facilities on a website.

(a) Describe how images are created and processed for use in the virtual tour.

.....
..... [1]

(b) What **two** features would you expect to see on the virtual tour website?

Feature 1.....
..... [1]

Feature 2.....
..... [1]

(c) Give **two** other applications that use virtual reality.

Application 1.....
..... [1]

Application 2.....
..... [1]