2205/306
COMPUTER APPLICATIONS
Oct./Nov. 2014
Time: 3 hours

THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN COMPUTER STUDIES

COMPUTER APPLICATIONS

3 hours

INSTRUCTIONS TO THE CANDIDATE

Write your name and index number in the spaces provided above.
Sign and write the date of the examination in the spaces provided above.
You should have drawing instruments for this examination.
All your answers should be written in the spaces provided in this question paper.
Answer any FIVE of the EIGHT questions given in this paper.
All questions carry equal marks.
Maximum marks for each part of a question are as indicated.
Do NOT remove any pages from this booklet.
Candidates should answer the questions in English.

For Examiner's Use Only

Question	1	2	3	4	5	6	7	8	TOTAL SCORE
Candidate's Score									

This paper consists of 20 printed pages.

**Candidates should check the question paper to ascertain that
all the pages are printed as indicated and that no questions are missing.**

1. (a) (i) Outline **three** reasons that may influence an organization to incorporate the use of computers in its operations. (3 marks)

(ii) Describe each of the following terms as used in computer applications:

I. operating systems;

II. utility programs.

(4 marks)

(b) Outline the effect of pressing each of the following computer keyboard combination keys in a windows environment:

(i) Ctrl + Esc;

(ii) Ctrl + Alt + Delete.

(2 marks)

(c) Figure 1 is an extract of text from a word processing program. Identify six text formatting features applied in the extract.
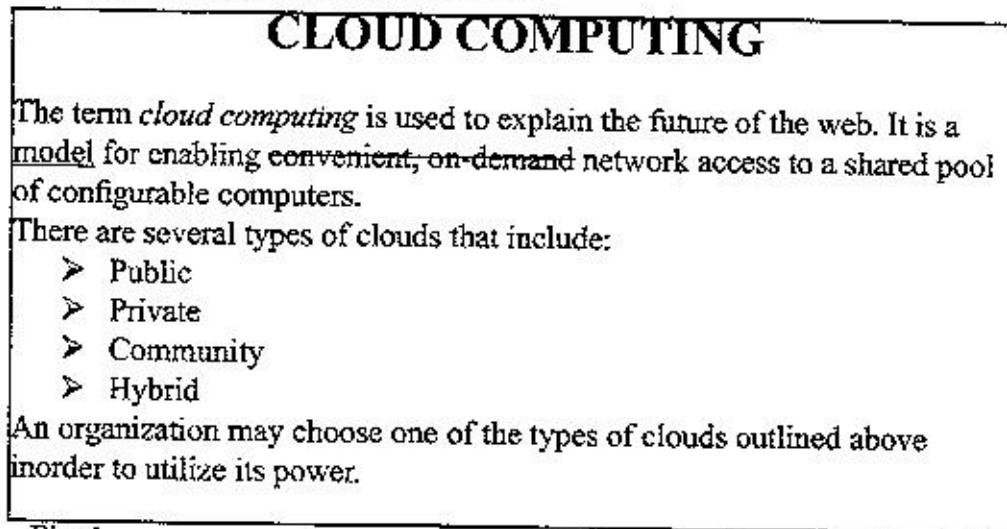
<div style="border:1px solid">

CLOUD COMPUTING

The term *cloud computing* is used to explain the future of the web. It is a model for enabling ~~convenient, on-demand~~ network access to a shared pool of configurable computers.
There are several types of clouds that include:
➤ Public
➤ Private
➤ Community
➤ Hybrid
An organization may choose one of the types of clouds outlined above inorder to utilize its power.

</div>

Fig. 1

(3 marks)

(d) Table 1 is an extract of a worksheet showing details of cars sold by a particular company.

Table 1

Car Model	Cost	Duty	Insurance	Total Cost
Premio	574,000			
NZE	450,000			
Wish	600,000			
Vitz	435,000			
Average				
Duty	30%			
Insurance premium	7.5%			

(i) Using cell referencing only, write a formula that could be used to compute:

I. duty payable for the model Premio;

II. insurance premium for the model Premio;

III. average cost for all cars.

(6 marks)

(ii) Describe a feature that could be used to compute the duty payable for the other car models based on the premio's duty. (2 marks)

2. (a) (i) State **two** equipment that could be used to reproduce a document in an office. (2 marks)

(ii) List **two** computer keyboard keys that could be used to toggle between two effects. (2 marks)

(b) (i) Explain each of the following terms as used in spreadsheet programs:

I. automatic recalculation;

II. what if analysis.

(4 marks)

(ii) With the aid of an example in each case, describe each of the following cell referencing methods:

I. range reference;

II. referencing using labels.

(4 marks)

(c) Table 2 shows students' examinations results in a database program.

Table 2

Name	Course	Intro	CA	QM	I.O.M	Grade
Joshua	IT	40	50	60	45	Pass
Carol	FB	60	70	50	80	Credit
Cate	IT	80	85	70	90	Distinction
John	FB	50	55	52	60	Pass

Write an expression that would be used to extract each of the following:

(i)　　students whose grade is "Pass";

(ii)　　students taking IT and whose name start with "J".

(4 marks)

(d)　　Distinguish between *cropping* and *cutting* as used in desktop publishing programs.

(4 marks)

3.　(a)　(i)　　Explain the term *bookmark* as used in word processing programs.

(2 marks)

(ii)　　With the aid of a sketch in each case, distinguish between *hanging* and *left* indents as used in word processing.

(4 marks)

(b)　(i)　　With the aid of a diagram, identify **three** groups of keys in a computer keyboard.
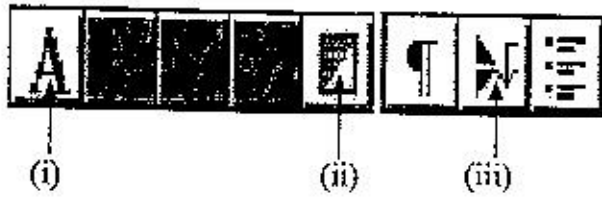
(3 marks)

(ii)　　Distinguish between a *diary* and a *scheduler* as used in computer applications.

(4 marks)

(c)　　With the aid of a sketch in each case, distinguish between *pie* and *doughnut* charts as used in spreadsheet programs.

(4 marks)

(d)   Figure 2 shows typical tools in a desktop publishing program toolbar. Outline the
        function of each of the features labeled (i), (ii) and (iii).   (3 marks)

        (i)   (ii)   (iii)

4.   (a)   (i)   State **three** approaches that could be used to transfer data from one
                     application program to another.   (3 marks)

             (iii)   State the file *extension* for documents created using each of the following
                     application programs:
                     I.   spreadsheet;
                     II.   desktop publishing.
                                                                                          (2 marks)
      (b)   Figure 3 shows an orthographic view of an object created in a CAD system. Draw the
             isometric view of the object.   (6 marks)

                                       Fig. 3
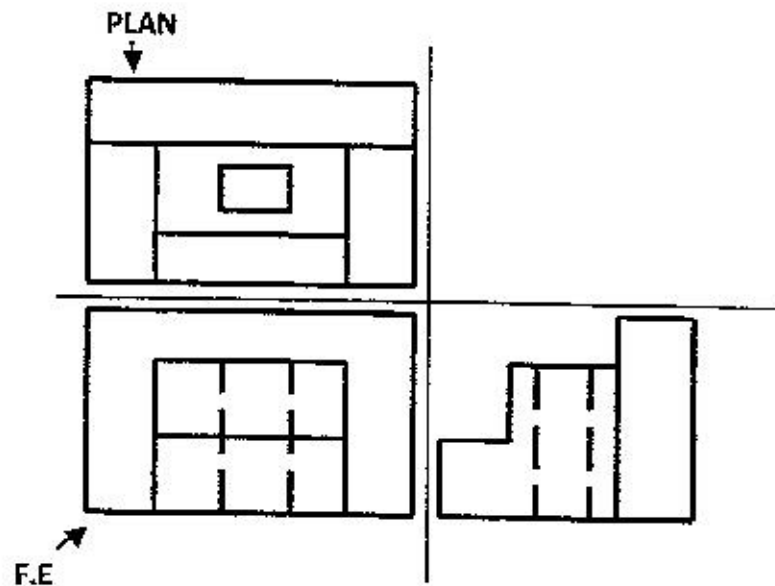
      (c)   (i)   Distinguish between *accounting* and *bookkeeping* as used in financial
                     programs.   (4 marks)

             (ii)   John is a new employee in a government organization. After receiving his first
                     salary he realized that it was less than what he had negotiated for. On enquiry he
                     was informed that there are some mandatory deductions. Outline **three** of these
                     deductions.   (3 marks)

      (d)   Explain **two** advantages of a tracking system in the transport sector.   (2 marks)

5. (a) (i) State **four** object snap modes associated with a line in CAD systems.

(2 marks)

(ii) Explain each of the following terms as used in CAD systems:

I. actrecord;

II. draworder.

(4 marks)

(b) (i) Explain the term *simulation* as used in computer applications.

(2 marks)

(ii) State **four** modules that could be included in a hotel management system.

(2 marks)

(c) Prudence was given a gift of a car by her father on her 18th birthday. The car was not registered in her name. Later she was involved in a road accident and the vehicle was damaged. When she approached the insurance company for compensation she was informed that she could not be compensated. Describe the most appropriate insurance principle the company could have applied.

(2 marks)

(d) (i) Distinguish between *multi-user* and *distributed* operating systems as used in computer application.

(4 marks)

(ii) Describe each of the following functions of an operating system:

I. interrupt;

II. scheduling.

(4 marks)

6. (a) (i) Define the term *concurrency* as used in a computer system.

(2 marks)

(ii) Outline **two** conditions that could lead to a deadlock in a computer system.

(2 marks)

(b) (i) Distinguish between *spooling* and *buffering* as used in computer memory management.

(4 marks)

(ii) Explain each of the following terms as used in desktop publishing programs:

I. kerning;

II. character map.

(4 marks)

(c) A certain institution intends to install computer systems in one of the vacant rooms in the administration block's basement. Explain **two** precautions that the institution should take to protect the computers against damage from rain water.

(4 marks)

(d) XYZ company limited, a local car assembling company has incorporated the use of robots in its assembly line.

(i) Outline **two** advantages of this move to the customers;

        (ii)   Explain **two** reasons that could influence the employees to resist this move.

                                                                        (4 marks)

7.   (a)   (i)   State **two** disadvantages of having multimedia enabled computers in an organization.

                                                                        (2 marks)

        (ii)   Outline the effect of pressing each of the following set of keys in an application program:

              I.   ALT + F;

              II.   CTRL + V;

              III.   CTRL + O;

              IV.   ALT + E.

                                                                      (4 marks)

    (b)   The government intends to equip all secondary schools with computers installed with a school management system.

        (i)   State **two** advantages of this move to the management;

        (ii)   Outline **two** challenges the government is likely to face during the implementation of this project.

                                                                   (4 marks)

    (c)   Explain **two** reasons that could have influenced the current trend of using flash memory.

                                                                        (4 marks)

    (d)   Explain each of the following terms as used in CAD systems:

        (i)   view;

        (ii)   layer;

        (iii)   patterning.

                                                                      (6 marks)

8.   (a)   (i)   Explain the term *clipboard* as used in word processing programs.

(2 marks)

(ii)   Figure 4 shows typical tools in a desktop publishing program toolbar. Outline the function of each of the features labeled I and II.   (2 marks)

Fig. 4

(b)   The finance officer of Successo Academy is contemplating preparing a financial statement showing all the assets and liabilities of the school.

(i)   Identify the financial statement to be prepared.
(ii)   Explain **two** uses of the financial statement identified in (i).

(5 marks)

(c)   (i)   Outline **three** advantages of paying for goods through mobile money transfer services.   (3 marks)

(ii)   Distinguish between *invoice* and *cash sale receipt* as used in financial programs.   (4 marks)

(d)   Figure 5 shows two sets of objects A & B created using a desktop publishing program. In each set, (i) is the original object and (ii) its corresponding image after manipulation. For each of the objects, outline the feature used in the manipulation.   (4 marks)
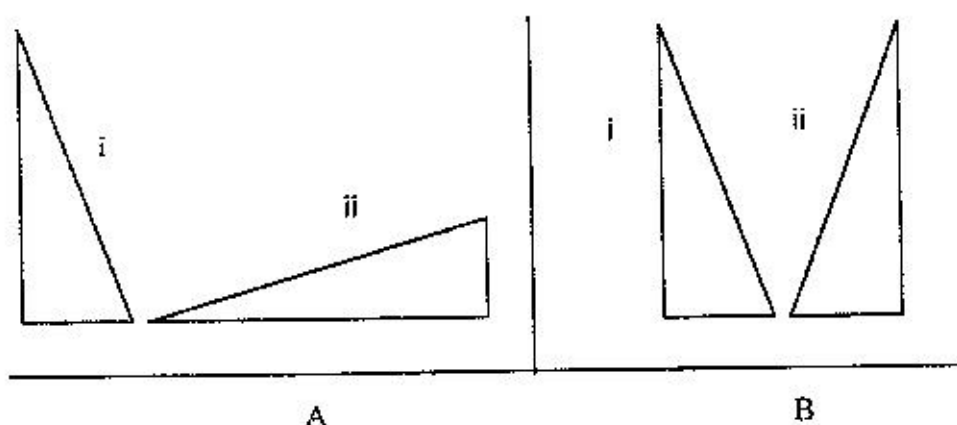

Fig. 5