23.16 COMPUTER STUDIES (451)

23.15.1 Computer Studies Paper 1 (451/1)

Name .... Index number ..../...............

451/1
COMPUTER STUDIES
Paper 1
(THEORY)
Oct./Nov. 2007
2½ hours

Candidate's signature ....

Date ....

THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education
COMPUTER STUDIES
Paper 1
(THEORY)
2½ hours

Write your name and index number in the spaces provided above.
Sign and write the date of the examination in the spaces provided above.
This paper consists of TWO sections; A and B.
Answer ALL the questions in section A.
Answer question 16 and any other THREE questions from section B.
All answers should be written in the spaces provided on the question paper.

For official Use Only

Section	Question	Candidate's Score
A	1 - 15	
B	16	
	17	
	18	
	19	
	20	
Total Score		

This paper consists of 14 printed pages

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

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Turn over

SECTION A (40 marks)
*Answer **ALL** the questions in this section in the spaces provided.*

1 Describe the computer booting process. (2 marks)

2 State the functions of the following keys on the computer keyboard: (2 marks)

(a) backspace ....

(b) insert (ins). ....

3 Jane has noticed the following problems in her computer:

♦ it is taking a longer time to start up;
♦ it is often hanging;
♦ applications are taking longer to load.

State **three** possible causes of these problems and how they can be solved. (3 marks)

4 (a) Define authenticity as used in software selection. (1 mark)

(b) List **four** ways of acquiring software in an organization. (2 marks)

5 Some of the storage disks available are: Zip disks, $3\frac{1}{2}$ inch floppy disks, DVDs and $5\frac{1}{4}$ inch floppy disks. Arrange these devices in an ascending order of storage capacity. (2 marks)

6 You have been asked to change your computer password. State a precaution you need to take in order to avoid each of the following:

(a) forgetting the password (1 mark)

(b) hacking. (1 mark)

7 State **four** benefits of using a computer in a school library. (2 marks)

8 Using six bits, find the two's complement of -23_{10}. (4 marks)

9 Explain data series, axis and legend as used in spreadsheet charts: (3 marks)

data series ....

axis ....

legend. ....

10 (a) Describe the term data integrity. (2 marks)

(b) State **four** situations in which data may lose integrity. (2 marks)

11 State the function of each of the following:

(a) network interface card (1 mark)

(b) network protocol (1 mark)

(c) hub. (1 mark)

12 List **four** types of publications that can be designed by using desktop publishing software. (2 marks)

13 Differentiate between the following pairs of terms as used in database design: (2 marks)

(a) input mask and design

(b) table and query. (2 marks)

14 List **four** factors to be considered when purchasing an operating system. (2 marks)

15 Write an algorithm to compute the area of a triangle. (2 marks)

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SECTION B (60 marks)

*Answer **question 16** and any other **THREE** questions from this section in the spaces provided.*

16   (a)   Study the flowchart below and answer the questions that follow.
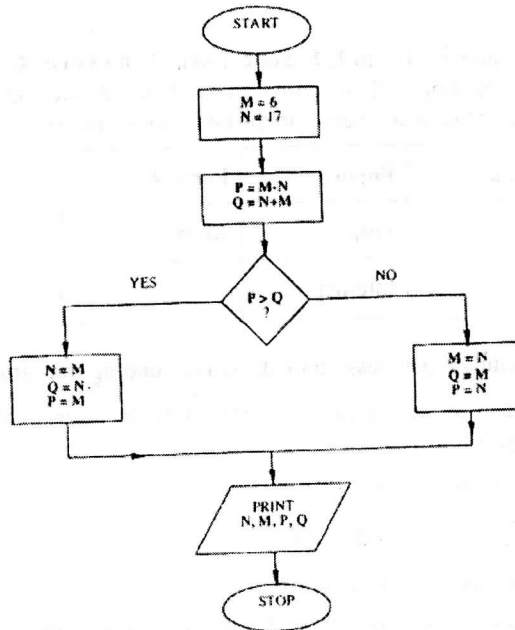
           (i)   Name the control structures used in the flowchart.   (2 marks)

           (ii)   Determine the values of **M, N, P** and **Q**.   (4 marks)

           (iii)   Write the pseudocode for the flowchart.   (7 marks)

   (b)   List **four** functions of an assembler.   (2 marks)

17   (a)   Define the following web related terms:

           (i)   web browser   (1 mark)

           (ii)   hyper link   (1 mark)

           (iii)   hyper text document.   (1 mark)

   (b)   List **six** activities performed on the web.   (3 marks)

   (c)   An institution has ten stand-alone computers.

           (i)   Suggest with reasons the most appropriate topology required to inter-connect the computers.   (3 marks)

           (ii)   State the necessary steps required to connect the computers to the internet.   (4 marks)

   (d)   Below is an e-mail address:

         ggitau @*moest* .*edu* .*ke*
         ↑   ↑   ↑   ↑
         (i)   (ii)   (iii) (iv)

         Name the parts labelled :   (2 marks)

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(i) ....

(ii) ....

(iii) ....

(iv) ....

18 A computer C directory has folders for **Form 1, Form 2, Form 3** and **Form 4**. Each class has student's folders labelled according to their admission number. The students create their own folder for the subject they are studying based on the table shown below.

Form 1	Form 2	Form 3	Form 4
OS	SP	Prog.	ADB
WP	DTP DB	Internet	

(a) Assuming there is one student per class, draw the corresponding tree structure.   (6 marks)

(b) (i) A form four student wants to create a folder to store her project. State the path for that project folder.   (2 marks)

(ii) Suggest how the student can ensure that:

work is not lost in case the hard disk fails;   (1 mark)

the project is not copied by other students.   (1 mark)

(c) (i) Other than I/O devices, list other three devices under the control of the operating system.   (3 marks)

(ii) Explain any **one** of the devices named in (c)(i) above .   (1 mark)

(d) Define the term trouble shooting.   (1 mark)

19 A manager wishes to replace the current manual system with a computerised one.

(a) Describe **three** main areas that must be evaluated to justify the replacement.   (6 marks)

(b) List the **three** areas that would be considered in the requirements specifications.   (3 marks)

(c) State and explain **three** ways that can be followed to replace the current system.   (6 marks)

20 (a) A headteacher keeps the following student details in a database: Name, Address, Town, Date of birth, Marks scored, Fees paid.

(i) Name the most appropriate primary key. Give a reason.   (2 marks)

(ii) For each item in the student's details above, indicate its most appropriate datatype as used in the database.   (3 marks)

(iii) Explain why input screens are better data entry designs than entering data directly to a table.   (2 marks)

(b) List **two** career opportunities associated with databases.   (2 marks)

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(c)   Distinguish between:

         (i)   a table in word-processing application and a table in a database application

                                                           (2 marks)

         (ii)   mouse pointer and insertion point.   **(2 marks)**

(d)   Outline the steps to be followed in order to merge cells in a word processing table.

                                                           (2 marks)

23.15.2 Computer Studies Paper 2 (451/2)

451/2
COMPUTER STUDIES
Paper 2
PRACTICAL
Oct./Nov. 2007
$2\frac{1}{2}$ hours

THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education
COMPUTER STUDIES
Paper 2
PRACTICAL
$2\frac{1}{2}$ hours

INSTRUCTIONS TO CANDIDATES

Type your name and index number at the top right hand corner of each printout.
Sign and write the date of the examination below the name and index number
on each printout.
Write your name and index number on the diskette.
Write the name and version of the software used for each question attempted in the answer sheet.
Passwords should not be used while saving in the diskettes.
Answer all questions.
All questions carry equal marks.
All answers must be saved in your diskette.
Make a printout of the answers on the answer sheets provided.
Hand in all the printouts and the diskette.

This paper consists of 5 printed pages

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

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Turn over

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1. Perfect Pizza Factory manufactures pasta for distribution to restaurants in Nairobi. Assuming that you are now working for the factory and have been given the following sales data:

	A	B	C	D	E	F	G	H	I
1	Restaurants	July	August	September	October	November	December	Total Product Sales	Average
2									
3	Nankos	34567	45671	89650	67222	56113	96282		
4	Burgees	100000	97600	82199	105999	140663	190654		
5	Kenge	96543	97600	82199	105999	140663	190654		
6	Tika	65000	97600	82199	105999	140663	190654		
7	Appetos	103456	97645	82297	105669	140220	175000		
8	Marries	76899	85400	96709	101324	140882	181230		
9	Generals	98000	97600	82199	105999	140663	190654		
10	My Café	25000	19654	15222	8000	5602	200		
11	Shooters	86777	75432	84366	105999	55678	201345		
12									
13									
14	Total Monthly Sales								

(a) Enter the data shown above into a spreadsheet and save it as Exam 1.

(10 marks)

(b) The sales for Appetos for October have been entered incorrectly, and should be 115669. Update the information in the spread sheet. (1 mark)

(c) Move the row containing Tika's information to the beginning of the list above Nankos. (1 mark)

(d) Delete the blank row after Shooters. (1 mark)

(e) Format all numeric values to 2 decimal places and use comma separators.

(2 marks)

(f) Use a formula in Column H2 to calculate the Total Sales for the first restaurant.

(1 mark)

(g) Copy the formula down the column to calculate the Total Sales for all restaurants. (1 mark)

(h) Use a formula to calculate the Total Sales for the Month of July. (2 marks)

(i) Copy the formula across the row to calculate the totals for the other months.

(1 mark)

(j) Using an appropriate function, calculate the Average Sales for each restaurant in Column I. (3 marks)

(k) Format Columns H and I to currency with 2 decimal places. (1 mark)

(l)   Given that the July sales were 10% above the sales for June in all restaurants:

    (i)   enter the label '% increment' in cell A16 and a value 10 in cell B16;

                                                                    (1 mark)
    (ii)   insert a column before July and use absolute cell referencing to calculate
            the sales for June;   (5 marks)

    (iii)   save the file as EXAM 2.   (2 marks)

(m)   Using a formula on cells B17 and B18 respectively, determine:

    (i)   the number of restaurants whose sales were above 60000 for the month
            of November;   (2 marks)

    (ii)   the maximum sales for the month of December.   (2 marks)

(n)   Create a line graph on a new sheet (monthly sales) using the file EXAM 2 in
        part (l) above and label the following: (8 marks)

        Chart title: Monthly Pasta Sales July-Dec 2005
        Y-axis: Total Monthly Sales
        X-axis: Month
        Legend Position: Right

(o)   Print EXAM 1, EXAM 2 and the graph in landscape orientation.   (6 marks)

2. (a) Using a word processing package, type the passage below as it appears and save it
       as A:\STRESSDOC1.   (27 marks)

1

*A parent who never expressed
appreciation, said, 'Well done' or
'I'm proud of you' can leave
an indelible mark.*

With attitude

There is much more to facing stress in life than the right diet and physical exercises.
Indeed, it could be that the attitude on which your life is founded is the most vital part of
the picture.

Take charge of your life
Keeping stress at bay involves treating yourself as someone with a right to life. That will
involve a degree of assertiveness and confrontation. Those very words can conjure up
images of a shoot-out at the OK Corral. It does not have to be that way. There is a world

of difference between being assertive and being aggressive. Sadly, many who need to break out from being always submissive to the expectation and demands of others can only imagine that the alternative is to be aggressive. While the real alternative is to be assertive.

You are submissive when:
- you are not willing or not able to express your feelings, needs, values and personal concerns
- you let others invade your personal space and trample on your rights.

You are aggressive when:
- you tend to stomp over other people
- you inflict and impose your views and values on others, expressing your feelings at their expense.

You are assertive when:
- you say what you want, without overwhelming or abusing other people
- you are clear about your own position and let other people know
- you can accept that others may have views different from your own and may wish to negotiate their position accordingly.

Assertiveness involves much more than defending your rights. It equally concerns your being prepared to expect that your own needs be recognized and met. In particular, two key statements typify the maturity of character that lies behind being assertive. These are the conviction that:

(a) *I have the right to decide for myself whether or not I am responsible for finding a solution to someone else's problem and they have the same right when faced with mine.*

(b) *I have the right to deal with people without having to make them like me and they have the same right concerning me.*

Few people find that assertiveness comes easily. But the hard work involved in monitoring your personal style together with some training through a local evening class or appropriate reading pays dividends. This is because mastering assertiveness leads to:

- better and more honest communication
- giving others greater dignity and respect
- learning to relax and reduce anxiety
- getting more of your needs accepted
- closer interpersonal relationships
- taking responsibility for what happens in your life
- feeling better about yourself
- protection from being taken advantage of by others.

(b) (i) Spell check the passage.   (2 marks)

    (ii) Indent the first line of the paragraph starting with "Keeping stress at bay......."
        by 1.2 cm (or 0.47").   (2 marks)

    (iii) Select the paragraph starting with "Assertiveness involves much more......" and
         set the left and the right margins to 2 cm (or 0.79") and fully justify. Save the
         changes as A:\STRESSDOC2.   (6 marks)

    (iv) Insert page numbering at the bottom center of each page.   (2 marks)

(c) (i) Retrieve A:\STRESSDOC1 and convert all the text from the paragraph starting
        with "There is much more....." into two columns of the same width and height.
                                                                      (5 marks)
    (ii) Change the line spacing for the entire paragraph starting with "There is more to
        facing stress......" to 1.5.   (2 marks)

    (iii) Save the changes as A:\STRESSDOC3.   (1 mark)

(d) Print the documents; A:\STRESSDOC1, A:\STRESSDOC2 and A:\STRESSDOC3.
                                                                                 (3 marks)