Form 4 Mock 451/1 COMPUTER STUDIES Past Paper

Name……………………………………………………….Index No……………………………..
School……………………………………………………Candidate's sign……………………
Date……………………………………

451/1
COMPUTER STUDIES
PAPER 1
July/August 2010
2 ½ hrs

BUTERE DISTRICT JOINT EVALUATION TEST – 2010
Kenya Certificate of Secondary Education (K.C.S.E)

COMPUTER STUDIES
PAPER 1
July/August 2010
2 ½ hrs

INSTRUCTION TO CANDIDATES.
1.Write your name and index number in the spaces provided above
2.Sign and write the date of examination in the spaces provided.
3.The paper contains two sections: Section A and B.
4.Answer all questions in section A
5.Answer question 16 and any other three questions in section B
6.All answers must be written on the question paper in the spaces provided below each question.

For examiner's use only.

Section Question Maximum score Candidate's score
A 1 - 1540
1615
1715
1815
1915
2015

Total score100

This paper consists of 12 printed pages. Candidates should check carefully
to ascertain that all the pages are printed as indicated and no questions are missing.
SECTION A (40 MARKS)
Answer ALL the questions in this section in the space provided.
1. (a) State the purpose of registers in a computer system.(1mk)

……
………………………………………………………………………………………………….

(b) Name two types of registers found in the central processing unit.(1mk)

……
………………………………………………………………………………………………….

2.With reference to quality of print, noise, level and cost, compare a dot matrix with a laser
printer.(3mks)

……
………………………………………………………………………………………………….
……
………………………………………………………………………………………………….
……
………………………………………………………………………………………………….

3.Convert 3BD16 to Octal.(3mks)

……
………………………………………………………………………………………………….
……
………………………………………………………………………………………………….
……
………………………………………………………………………………………………….

4.(a) State two importance of internet to society.(2mks)

……

……….

……

……….

(b) Describe two challenges that internet has brought to society.(2mks)

……

……….

……

……….

5.Differentiate between the following types of integrity constraints

(i) Validity integrity(1mk)

……

……….

(ii) Entity integrity(1mk)

……

……….

(iii) Referential integrity(1mk)

……

……….

6.Describe two computer crimes taking place in society citing control measures that can be put in place to curb them.(2mks)

……

……….

……

……….

7.Computers process digital data through a process called coding. State and explain three coding systems.(3mks)

……

……….

……

……….

……

……….

8.(a) Give four application areas of spreadsheets.(2mks)

……

……….

……

……….

(b) Write the following formulae as absolute with reference to cell G20, = F10 + G20.(1mk)

……

……….

9.Define modular programming and state two advantages of modular programming.(2mks)

………

……

………

……

10.While using a word processor, you realize that the contents of the document don't fit on one page. They exceed to the other page by three lines. Suggest three possible ways you can make the document fit one page.(3mks)

………

……

………

……

………

……

11.State the function of each of the following:-

(a) Network protocol(1mk)

………

……

(b) Hub(1mk)

………

……

12.Differentiate between the following pairs as used in database design.

(a) Input mask and design.(2mks)

………

……

………

……

(b) Table and query(2mks)

………

……

………

……

13.List four factors to be considered when purchasing an operating system.(2mks)

………

……

………

……

14.Write algorithm to compute the area of a triangle.(2mks)

………

……

………

…………………………………………………………………………………………………….

15.Define the term artificial intelligence.(2mks)

……

…………………………………………………………………………………………………….

……

…………………………………………………………………………………………………….

SECTION B (60 MARKS)

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

16.Study the flow chart below and answer the questions that follow.

(a) What would the flow chart generate as output if the value of N at input was

(i) 6?(2mks)

……

…………………………………………………………………………………………………….

……

…………………………………………………………………………………………………….

(ii) 1?(2mks)

……

…………………………………………………………………………………………………….

……

…………………………………………………………………………………………………….

(b) Write a Pseudocode that does the same thing as the chart above.(7mks)

(c) Modify the flow chart so as to reject an input below O and to avoid looping when the input is O.(4mks)

17.(a) Describe the ways in which a computer can represent a position and negative number.(2mks)

……
……………………………………………………………………………………………………….

……
……………………………………………………………………………………………………….

(b) A particular computer stores numbers in a single 8 – bit word. How would it represent 0.312510?(3mks)

……
……………………………………………………………………………………………………….

……
……………………………………………………………………………………………………….

……
……………………………………………………………………………………………………….

(c) What is the decimal equivalent of the number 1.01112?(2mks)

……
……………………………………………………………………………………………………….

……
……………………………………………………………………………………………………….

(d) Perform the decimal subtraction 1410 – 610 using
(i) Regular binary.(3mks)

……
……………………………………………………………………………………………………….

……
……………………………………………………………………………………………………….

……
……………………………………………………………………………………………………….

(ii) One's complement.(3mks)

……
……………………………………………………………………………………………………….

……
……………………………………………………………………………………………………….

……
……………………………………………………………………………………………………….

18.(a) The formula = K20 + P $ 18 was typed in cell L21 and then copied to cell M24 of a

spreadsheet. Write the formula as it appears in cell M24.

………………………………………………………………………………………………………

……………………………………………………………………………………………….

(b) (i) Define the term spreadsheet.(1mk)

………………………………………………………………………………………………………

……………………………………………………………………………………………….

(ii) Give two examples of spreadsheet packages available in the market today.(2mks)

………………………………………………………………………………………………………

……………………………………………………………………………………………….

………………………………………………………………………………………………………

……………………………………………………………………………………………….

(iii) Explain the following terms as used in a spreadsheet.
What IF analysis (2mks)

………………………………………………………………………………………………………

……………………………………………………………………………………………….

Cell(1mk)

………………………………………………………………………………………………………

……………………………………………………………………………………………….

Formula(1mk)

………………………………………………………………………………………………………

……………………………………………………………………………………………….

Pie-chart(1mk)

………………………………………………………………………………………………………

……………………………………………………………………………………………….

(c) Distinguish between the following sets of terms used in spreadsheet.
(i) Worksheet and workbook(2mks)

………………………………………………………………………………………………………

……………………………………………………………………………………………….

………………………………………………………………………………………………………

……………………………………………………………………………………………….

(ii) Filttering and sorting(2mks)

………………………………………………………………………………………………………

……………………………………………………………………………………………….

………………………………………………………………………………………………………

……………………………………………………………………………………………….

(d) State one way in which a user may reverse the last action taken in a spreadsheet package.
(1mk)

………………………………………………………………………………………………………

……………………………………………………………………………………………….

19.(a) Define an information system.(1mk)

………
………………………………………………………………………………………………….

(b) State two circumstances under which interviews may be used as a method of gathering information (2mks)

………
………………………………………………………………………………………………….
………
………………………………………………………………………………………………….

(c) (i) What is a computer laboratory (1mk)

………
………………………………………………………………………………………………….

(ii) Give two measures that should be observed when using the computer laboratory to protect computers against loss of data (2mks)

………
………………………………………………………………………………………………….
………
………………………………………………………………………………………………….

(d) State three factors you would consider before enrolling for an ICT course in an institution of higher learning.(3mks)

………
………………………………………………………………………………………………….
………
………………………………………………………………………………………………….
………
………………………………………………………………………………………………….

(e) Give two duties of each of the following computer professionals.
(i) Computer programmer(2mks)

………
………………………………………………………………………………………………….
………
………………………………………………………………………………………………….

(ii) System analyst(2mks)

………
………………………………………………………………………………………………….
………
………………………………………………………………………………………………….

(iii) Computer technician(2mks)

………
………………………………………………………………………………………………….
………
………………………………………………………………………………………………….

20.(a) Distinguish between unshielded twisted pair (UTP) and shield twisted pair (STP) cables.(2mks)

……
……………………………………………………………………………………………………….
……
……………………………………………………………………………………………………….

(b) (i) With an Aid of a diagram describe the mesh topology.(3mks)

(ii) Highlight one advantage and two disadvantages of the above network topology.(3mks)

……
……………………………………………………………………………………………………….
……
……………………………………………………………………………………………………….
……
……………………………………………………………………………………………………….

(c) Highlight four limitations of computer networking.(4mks)

……
……………………………………………………………………………………………………….
……
……………………………………………………………………………………………………….
……
……………………………………………………………………………………………………….
……
……………………………………………………………………………………………………….

(d) Define the following terms.
(i) Data Terminal Equipment.(1mk)

……
……………………………………………………………………………………………………….

(ii) Remote Terminal(1mk)

……
……………………………………………………………………………………………………….

(iii) Internet(1mk)

....

....