Name: .... Index No. ....

School: ....Date: .... Candidate's Sign ....

451/1
COMPUTER STUDIES
FORM 4
PAPER 1
MARCH / APRIL 2013
TIME: 2 HOURS

WESTERN ZONE JOINT EXAMINATIONS - 2013 (WEZOJE)
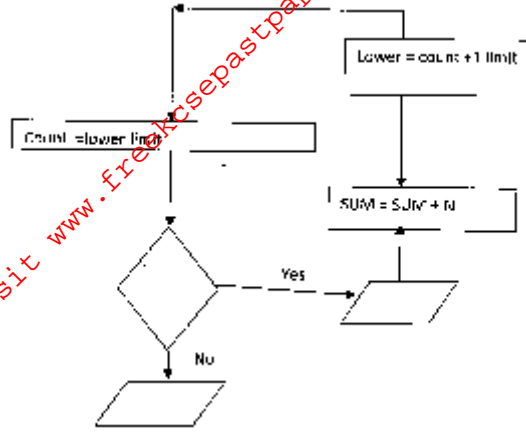## Kenya Certificate of Secondary Education (K.C.S.E)

<u>**INSTRUCTIONS TO CANDIDATES**</u>

1.   Write your name, School and Index Number in the spaces provided above.

2.   Sign and write the date of examination in spaces provided above.

3.   This paper consists of two sections A and B.

4.   Answer all questions in sections A.

5.   Answer question 16 and any other three questions from section B.

SECTION A: (40MARKS)

Answer all the questions in this section

1.

Write a pseudo code for the above flow chart. (2marks)

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2. Differentiate between optical and magnetic scanning techniques used for input and give **two** examples in each case. (2marks)

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3. Name the **three** main types of human computer interface. (1½ marks)

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4. Distinguish between a folder and a subfolder. (1mark)

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5. Draw an illustration of a USB port and explain its function. (2marks)

6. Differentiate between parallel and serial port interface cables (1mark)

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7.   a) Explain the following storage disks.   (1mark)
          i) Zip disks

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          ii) Jaz disks

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      b) Give **four** examples of optical disks   (2marks)

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8.   What do you understand by the following terms: (1½ marks)
      i) Industrial espionage

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      ii) Eaves dropping

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      iii) Surveillance

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9.   a) Differentiate between the following: (1mark)
          i) Surf/browse

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          ii) Hyperlink

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      b) Explain **two** functions performed by the UPS

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10.   a) List **three** data processing methods   (1½ marks)

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      b) Define the term internet.   (1mark)

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      c) List **four** services offered by internet.   (2marks)

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11. a) State **three** communication methods without cables. (1½ marks)

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b) Differentiate between fourth generation languages and third generation languages. (1mark)

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12. a) Using twos compliments work out $15_{10} - 8_{10}$ (2marks)

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b) Differentiate the following terms: (1½ marks)

    i) Source program

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    ii) Object code

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    iii) Translator

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13. Windows operating system provides the use of tool to help in managing storage devices and media. Distinguish between the following terms: (1½ marks)

i) Disk defragmenter.

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ii) Partitioning disk

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iii) Compressing.

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14. a) Give **two** reasons for partitioning a disk (1mark)

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b) List **two** main types of desktops publishing software (1mark)

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c) Name any **four** database models (2marks)

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15. a) Differentiate between functions and formulae   (2marks)

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b) Name **four** basic types of data used in a spreadsheet.   (2marks)

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c) Differentiate between   (1½ marks)
     i) Cell referencing

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     ii) Relative references

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     iii) Absolute referencing

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d) What is data integrity?   (½ mark)

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e) Differentiate between the following errors: (1mark)
     i) Transcription errors

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     ii) Transposition errors

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f) The following methods are used in data protection. Explain   (2marks)
     i) Audit trail

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     ii)   Data encryption

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     iii) Log files

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     iv) Fire walls

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SECTION B: (60MARKS)
Answer question 16 and any other three questions from this section

16. a) Baraka wholesalers has two categories customers for order processing. Category 'A' obtains 10% discount on all orders up to Ksh.10, 000 otherwise the discount is 20% on the entire order. Category 'B' obtains 30% discount on all orders if the debt repayment is 'good' otherwise the discounts is 15%. Draw a flow chart for the order processing.

(8marks)

b) A form four class sat for an exam in eight subjects. A student must get an average of 50% in all subjects in order to pass. A report is required that will show the name, marks obtained by each student per subject, the average mark and whether the student has passed or failed. Draw a flow chart for this report.   (7marks)

17. a) Define the term network topology. (1mark)

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    b) Name **three** different types of computer network topologies (3marks)

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    c) Outline any **four** functions of network operating systems. (4marks)

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    d) Explain the following as used in internet services. (3marks)
        i) E – mail

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        ii) E – commerce

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        iii) E – leaning

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    e) Piracy means making illegal copies of copyrighted software, information or data. Outline
       any **four** ways in which the copyright law can help to reduce piracy. (4marks)

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18. a) Define the term data communication (1mark)

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    b) Explain the following terms as used in data communication (2marks)
        i) Bandwidth

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    ....

        ii) Attenuation

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    c) Explain the following three types of computer networks (3marks)
        i) LAN

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ii) MAN

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iii) WAN

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d)   i) Differentiate between system and application software   (1mark)

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ii) List any **four** factors to be considered when selecting software.   (2marks)

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e) Describe the following communication modes giving an example in each case. (6marks)
i) Simplex

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ii) Full duplex

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iii) Duplex

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19.   a) Give **three** main advantages of using computers for data processing functions over other
types of office and business equipments.   (3marks)

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b) Give **three** reasons why DVD's are increasingly being used today.   (3marks)

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c) Giving an example, mention **three** categories of places where you can advance your
computer skills after sitting for your K.C.S.E.   (3marks)

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d) Mention any **four** formatting features used in Ms Word application.   (2marks)

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e) Define the term electronic spreadsheet. (1mark)

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f) Explain the following terms as used in Ms Excel spread sheet package. (3marks)

i) Range

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ii) What if analysis

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iii) Automatic recalculation

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20. a) Define the term information system (1mark)

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b) Outline **three** circumstances under which an organization may want to develop a new information system. (3marks)

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c) List down any **six** characteristics of a system (3marks)

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d) Describe the term data processing (1mark)

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e) Outline **five** qualities of good information (2½ marks)

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f) List **three** file organization methods in a computer (½mark)

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g) Briefly describe the following type of computer files   (3marks)

   i) Master file

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   ii) Transaction file

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   iii) Back up file

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