# SUNSHINE SECONDARY SCHOOL MOCK 2015

## COMPUTER PAPER 1

### SECTION A (40 Marks)

*Answer **all** questions in this section*

1. Give **TWO** reasons why Powder type fire extinguishers are not recommended to be used in a computer laboratory. (2 Marks)

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2. State the purpose of each of the following memories in a computer system. (2 marks)
    (i) ROM

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    (ii) RAM

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3. State two factors that one would consider when selecting data entry method in computing. (2 Marks)

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4. Describe the following types of printers and state one application area of each.(3Marks)
    (a) Dot matrix

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(b) Thermal printer.

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5. Differentiate between in-house software and freeware. (2 Marks)

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6. Give two importance of feedback mechanism in systems (2 Marks)

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7. With an aid of a diagram, explain one-to-one database relationship. (2 Marks)

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8. KASSU Secondary School intends to set up internet connection in their school for e-learning
   purposes. Advise the school management on four internet connectivity requirements that is
   required for them to be able to access internet. (2 Marks)

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9. The figure below shows an extract of an e-mail application.
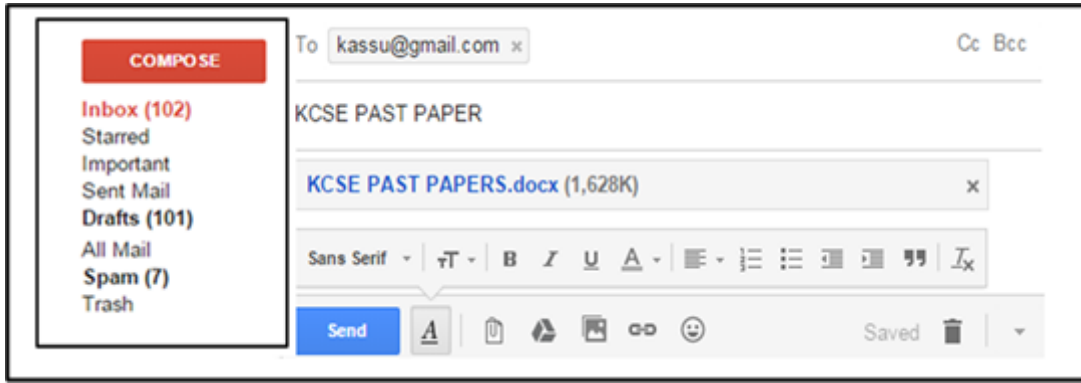


What is meant by each of the following terms: (3 Marks)

(a) Trash

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*(b)* Spam

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*(c) Inbox*

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10. State two ways in which users in an organization can be a security threat to data in an information system. (2 Marks)

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11. State three negative impact of information communication technology on the Environment.
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12. In a computer based information system, state the purpose of the following files and give **one** example where such a file may be required in a school. (4 marks)

a. Report file.

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b. Sort file.

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13. State three responsibility of a Database administrator in an organization. (3 Marks)

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14. With an example for each, describe how computers are used in the following areas of education; (3 Marks)

a. Simulation

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b. Tutorial

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15. a. Dan a computer student noticed that every time a person enters the computer lab the computer screen flickers. Identify three reasons why the monitor might be flickering

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b. State two ways in which the problem can be solved                     (2 Marks)

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## SECTION B (60 Marks)

*Answer **question 16** and any other **three** questions*

16. a. State two advantages and two disadvantages of high level programming language

(2 Marks)

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b. State three situations when REPEAT .. UNTIL structure can be used in writing a program

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c. The roots of the equation $ax^2 + bx + c = 0$ are given by the formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

i. Write a pseudocode for the above program (5 Marks)

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ii. Draw a flow chart for the above pseudocode                    (5 Marks)

17. (a) (i) The figure below shows a picture tool bar
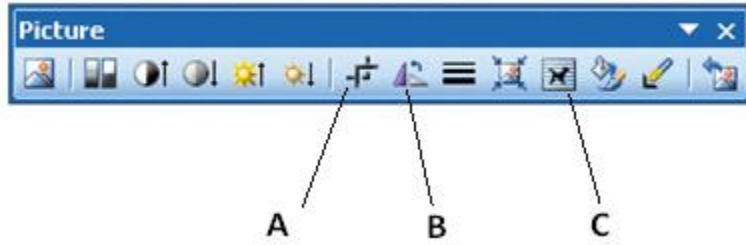


Name and state the functions of the features marked A, B and C:

   (i)   A                                                                  (1 Mark)

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   (ii)   B                                                                (1 Mark)

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   (iii)  C                                                            (1 Mark)

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(b) State the importance of Column breaks as used in word processor.      (1 Mark)

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(c) Change case is where a user applies so that the text can have some contrast in size. Write the word   Digital  SIGNAL                               (2 Marks)

      (i) Title case

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      (ii) Toggle case

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(d)  Define the following terms as used in charts.                                      (2 Marks)

(i)                                     Legend

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(ii) Data range

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(e) The table below shows how a kiosk owner uses a spread sheet to keep records in a shop.

|   | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | ITEM NAME | NUMBER OF ITEMS | UNIT COST | TOTAL BUYING PRICE | TOTAL SELLING PRICE | PROFIT |
| 2 | Blue band | 150 | 120 | | | 3600 |
| 3 | Toss | 135 | 50 | | | 1350 |
| 4 | Cow boy | 120 | 120 | | | 2880 |
| 5 | Panga soap | 118 | 50 | | | 1180 |

(I)  Write a **function** to calculate the total buying price.                          (2 Marks)

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(II) Write a **formula** to calculate the Profit.                                       ( 2 Marks)
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(III)    The total buying prices of all items was increased by 12% and the value 12% is
         placed in cell B6. Using cell addresses with absolute referencing, write a formula to
         calculate the Total Selling Price in cell E2.                                  (2 Marks)
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(IV)    State the output of the expression =SUMIF(F2:F5,"<1 500")would return.(1 Mark)
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18. a. Describe the term prefixing an extra sign bit as used in data representation. (2 Marks)

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b. Convert each of the following numbers   system.

(i) $0.78125_{10}$   to binary                                                                              (2 Marks)

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(ii) $3A9_{16}$  to Octal                                                                              (2 Marks)

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c.    Perform the following binary operation.                                      (3 Marks)

$1010.11+111.10-101.11$

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d.    Using one's complement, perform the following binary arithmetic leaving the answer
      decimal notation.                                    $17_{10} - 45_{10}$                          (6 Marks)

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19. a. Distinguish between the following terms as used in data communication (6 Marks)

    i.    Guided transmission medium and unguided transmission media

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    ii.    Multiplexing and demultiplexing

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    iii.    Logical and physical Topology

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b.    Below is a diagram of a network topology.
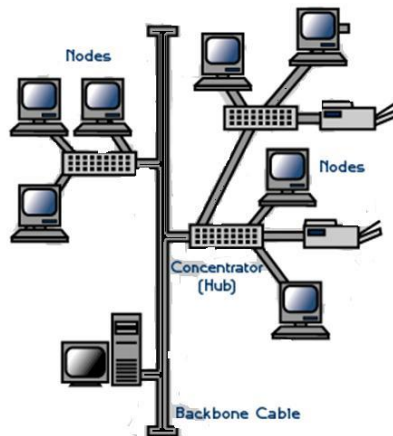


    i.    Name the above topology        (1 Mark)

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ii.    State two advantages and two disadvantages of using the topology named above

(4 Marks)

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c.    List and explain the two data transmission techniques                    (4 Marks)

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20. a.  Distinguish between a computer drive and computer driver              (2 Marks)

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b. State any four factors to consider when selecting an operating system (4 Marks)

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c. Explain any four factors that dictates how the operating system organizes data in a computer (4 Marks)

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d. Define the term file in relation to the operating system (1 Mark)

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e. The operating system stores details of a file for easy identification and retrieval of files. Explain any four file details the operating system uses to search and identify a file (4 Marks)

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f. Distinguish between a menu driven operating system and graphical user interface operating system (2 Marks)

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