

Name: Index No.....

AdmNo.....Candidate's Signature

Date:.....School.....

451/1

COMPUTER STUDIES

Paper 1

(Theory)

October 2022

Time: 2¹/₂ Hours

NYAHOKAKIRA CLUSTER THREE EXAMINATION



Kenya Certificate of Secondary Education
COMPUTER STUDIES

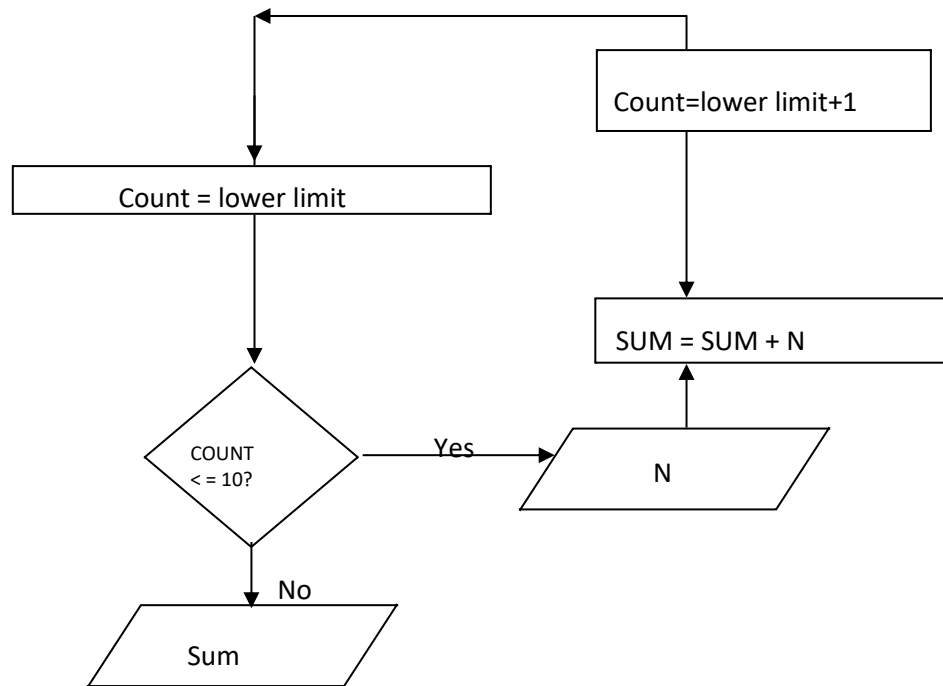
Instructions to candidates

- a) Write your name and Index number in the spaces provided above.
- b) Sign, write the date of examination and school.
- c) The paper consists of TWO sections; A and B.
- d) Answer ALL the questions in section A.
- e) Answer question 16 and any other THREE questions from section B.
- f) ALL answers must be written in the spaces provided on the question paper.
- g) This paper consists of 9 printed pages.
- h) Candidates should check the question paper and ensure that all the pages are printed as indicated and no questions are missing.

For Examiner's Use Only

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

SECTION A- Answer all the questions in this section



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

2. Identify the input devices shown in the diagrams below: (3mks)



i



ii



iii

3. a) Explain turn around documents as used in data input (1mk)

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

(2mks)

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4. a) Give **two** reasons for partitioning a disk.


(2mks)

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b) Identify three hardware considerations to be made before installing an operating system. (3mks)


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5. State the purpose of the following pointers as displayed in excel worksheet

i. 

(1mk)

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ii. 

(1mk)

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6. a) A Form four computer student is attempting to print a programming documentation. The printer is not responding to the print command. Explain two possible causes for the anomaly.

(2mks)

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b) List **two** types of publications that can be designed using DTP software.

(1mk)

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7. Explain the following terms. (2mks)

(a) Computer fraud

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(b) Alteration

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8. Apart from use of carpets, suggest **three** possible ways of reducing dust in a computer room. (3mks)

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9. Pat has installed internet in his home computer in order to use it for browsing. State three ways in which he would prevent viruses from infecting the computer. (3mks)

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10. State **two** tools that a system analyst may use to design a system (2mks)

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11. Distinguish between data verification and data validation as used in data processing (2mks)

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

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

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13. Differentiate between SRAM and DRAM (2mks)

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14. State two advantages of impact over non-impact printers. (2mks)

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15. a) State the purpose of registers in a computer system. (1mk)

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

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SECTION B (60 MARKS)

Answer question 16 (Compulsory) and any other three questions from this section

16. (a) When invoicing customers, the invoice clerk has to work out the discounts allowable on each order. Any order over 20,000/= attracts a “bulk” discount of 7%. A customer within the trade is allowed 10%. There is also a special discount of 2% allowed for any customer who has been ordering regularly for over 2 years. Using a flowchart show clerical procedure for working out discount entitlement. (7mks)

(b) Name the control structures you have used in the flow chart above. (2mks)

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(c) Explain three methods you would use in error detection during program testing. (3mks)

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(d) State the use of the following flowchart symbols.

(3mks)

(i)



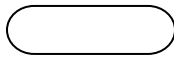
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(ii)



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(iii)



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17. (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. (2mks)

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

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

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(iii) Explain the following terms as used in a spreadsheet.

What IF analysis (2mks)

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Cell (1mk)

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Formula (1mk)

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Pie-chart (1mk)

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(c) Distinguish between the following sets of terms used in spreadsheet.

(i) Worksheet and workbook (2mks)

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(ii) Filtering and sorting (2mks)

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

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18. (a) Define the term ergonomics

(1mk)

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(b) (i) Give any three advantages of using a fibre optic cable in data transmission.

(3mks)

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(ii) Name two types of fibre optic.

(1mk)

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(c) State three advantages of wireless communication.

(3mks)

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(d) Explain the following terms.

(3mks)

(i) Multiplexing

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(ii) Bandwidth

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(iii) Baseband signal

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(e) Explain the use of these communication devices.

(4mks)

(i) Routers

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(ii) Hub

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19. a) Name and explain the **four** basic elements of an email compose window. (4mks).

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b) State and explain **four** advantages of using an email over the traditional mails (4mks)

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c) Define the following terms as used in the internet. (4mks)

i Web browser

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ii Surfing

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iii News group

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iv Search engine

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d)WhatsApp is a common social platform supported by almost all smart phones. State any **three** kinds of data exchanged through WhatsApp (3mks)

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20. (a) Describe the octal number system. (2mks)

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(b) Convert each of the following to the number system indicated:

i. 111.101_2 to decimal (3mks)

ii. 14.6875_{10} to binary (4mks)

(c) Convert the number -17_{10} into 8-bit:

i. Signed magnitude representation. (2mks)

ii. Two's compliment (2mks)

(d) Perform the arithmetic operation. (2mks)

$$110.11_2 + 11.011_2$$