NAME……………………..………………………...   DATE ………………….………

INDEX NO.……….……….………………... ………. SIGNATURE   …………….……….
451/1
COMPUTER STUDIES
PAPER 1
JUNE, 2022
TIME: 2¹/₂ HOURS

SUKELLEMO JOINT PRE-MOCK EXAMINATION 2022

Kenya Certificate of Secondary Education.
451/1
COMPUTER STUDIES
PAPER 1
TIME: 2 HOURS 30 MINUTES.

Instructions to Candidates
- Write your name and Index Number in the spaces provided.
- This paper consists of two sections.
- Answer **ALL** questions in **section A**
- Answer **Question 16** and other THREE questions in section B.
- All answers MUST be written in the spaces provided on this question paper.

Section	Question	Maximum Score	Actual Score
A	1 - 15	40	
B	16	15	
	17	15	
	18	15	
	19	15	
	20	15	
TOTAL		100	

SECTION A (40 MARKS)
ANSWER ALL QUESTIONS FROM THIS SECTION

1. Explain two ways in which computer can be used in the following areas.   (2mks)
   a) Entertainment industries

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   b) Banking

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2. Write the following abbreviations in full.   (2mks)
   a) POST

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   b) SVGA

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3. Suggest how in future the computer may be made user-friendly for persons who are visually
   challenged.   (1mk)
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4. Explain three advantages of an inkjet printer.   (3mks)

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5. Odhiambo a computer student at Lenana High School had the following problems.(2mks)
    a) Headache
    b) Backache

Give the likely cause of the above problems and give the likely solution for each problem.

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6. a) Highlight four factor to consider when choosing an input device.   (2mks)

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    b). State and explain **two** types of computer files   (2 mks)

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7. Juma bought a computer with the following features.
    i.   4. 0 GB primary storage
    ii.   500.0 GB SATT HDDC
    iii.   Dual core processor
    iv. 19^0 TFT VDU

a) What do you understand by the term ***dual core*** computer? (1mk)

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8. Define a multimedia system and state two components of a multimedia system. (2mks)

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9. a) State the type of files which have the following file extensions and give an example for each (2mks)

   i.   . BAT

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   ii.   . XLS

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b) List four types of proof reading tools in a word process. (2mks)

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10. a) While Wekesa is editing a workbook data item, a # ***VALUE! Error*** occurred. Identify the cause of such error in the affected worksheet. (1mk)

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b) Distinguish between an embedded chart and a chart sheet. (2mks)

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11. State four importance of the internet to the society. (2mks)

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12. Draw a flowchart that can be used to find the area of a semi-circle. (4mks)

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13. Define the following terms as used in desktop publishing (2mks)
    i.   Master page

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ii.   Gutter

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14. Use two complements to complete the value of Y in eight bit binary notation.   (4mks)

$96_{10} + Y_{10} = 124_{10}$

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15. a) Natural disaster can cause loss of data and programs. State two ways of ensuring that data and programs are not lost if a disaster strikes.   (2mks)

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b) State two advantages of using robots in industries.   (2mks)

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Section B (60 marks)

Answer Question 16 and any other three from this section.

16. a) State **three** functions of an assembler. (3mks)

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b) Highlight **three** characteristics of a good flowchart. (3mks)

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c) Give **two** examples of a *web scripting* languages. (2mks)

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d) Nekta company give a discount of **16%** for purchase worth **sh. 10, 000** and above; **10%** for purchase worth between **sh. 5000** and **10,000** and none for purchase worth sh. **5,000** and below. Write a pseudo code for a program that would accept the value of a purchase, compute the discount, then display the new amount to be paid by a customer. (7mks)

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17. a) What is meant be each of the following terms as used in data security and controls. (2mks)
   i. Confidentiality

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   ii. Threats

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b) Jane a form four student was advised to partition a hard disk for her computer. Explain two reasons that may have necessitated this. (4mks)

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c) If one table in a database contains the fields: **EMPLOYEE – ID, LAST – NAME, FIRST – NAME** and **HIRE – DATE** and another contains the fields **DEPARTMENT, EMPLOYEE – ID** and **SALARY**, it is possible to establish a relationship between the two tables.

    i.   Name the type of such a database. (1mk)

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    ii.   What type of relationship can be established between the tables? (1mk)

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    iii.   Provide the most appropriate data types for each of the fields. (3mks)

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d) A publishing firm designed the following publication using a DTP software.

SALE!! SALE!! SALE!!

COMPUTER SALES

10% OFF

W elcome to the exciting sale of:
- ✓ Laptops
- ✓ Desktops
- ✓ CD & DVD

All at 10% off

i. Give two reasons why the firm prefer using DTP instead of Word Processors. (2mks)

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ii. Identify four formatting features used in the designing the publication. (2mks)

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18.a) i) Give any TWO ways of representing a negative number in computer system.
(2 marks)

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ii) The following eight-bit pattern represents the two's complement of an integer:
110001001.   What is the decimal equivalent?

(2 marks)

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iii) Subtract the binary number 0011001 from 10110010.   (2 marks)

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b) Describe the following types of errors in data processing, giving examples.

(3mks)

(i) **Truncated**

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(ii) **Transposition**

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(iii) **Transcription**

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c) Give the mode of processing that can be used in the listed situations. Explain your answer.

(6 marks)

(i) Generating student's report forms at the end of the term.

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(ii) Railway ticket reservation.

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(iii) Point of sale terminal in a supermarket.

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19. a) Explain the meaning of the following system characteristics.   (4Marks)

   i) Entropy

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ii) Controls

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b) State the three functions of an information system.   (3Marks)

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(c) The Ministry of Education is changing the education system in Kenya from 8-4-4 to a
Competency Based Curriculum (CBC) system by using a few schools to test the new system.
   a) Identify the type of change over system being used here.   (1 mark)

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b) What would be the advantage of using this changeover strategy?   (2 marks)

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c) State any three contents of a feasibility study report.   (3 marks)

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d) State two ways in which ICT has been used in the horticulture industry. (2 marks)

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20. a) Describe **three** ways in which computers have positively impacted on education.
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b) i. With aid of a diagram, describe a Star topology. (4 marks)

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ii. State two advantages and two disadvantage of Star topology. (4 marks)

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c) i. Define the term piconet. (1 mark)

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ii. What is the function of a Repeater in networking? (1 mark)

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d.Explain **two** factors you would consider before enrolling for an ICT course in a College.
(2mks)

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