** MARANDA HIGH SCHOOL**

**Kenya Certificate of Secondary Education**

 **MOCK EXAMINATIONS 2022**

**451/1 Computer Studies Paper 1**

 **September, 2022 Time: 2½ Hours**

**Name**: ………………………………………….…….…… **Adm** **No**: ………………

**Class**: ………………**Candidate’s** **Signature**: ………..…….. **Date: 6th September, 2022**

 **Time: 7.00-9.30 AM**

**Instruction to candidates**

1. *Write your name and index number in the spaces provided above*
2. *This paper consists of* ***two*** *sections* ***A*** *and* ***B***
3. *Answer* ***ALL*** *questions in section* ***A***
4. *Answer question 16 and any other* ***THREE*** *questions from section* ***B***
5. *All answers should be written in the spaces provided on the question paper*
6. *This paper consists of* ***12*** *printed pages.*
7. *Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.*

**For Examiner’s Use Only**

|  |  |  |
| --- | --- | --- |
| **SECTION** | **QUSTIONS** | **CANDIDATE’S SCORE** |
| A | 1 -15 |  |
| B | 16 |  |
| 17 |  |
| 18 |  |
| 19 |  |
| 20 |  |
|  | **TOTAL SCORE** |  |

*Turn over*

**SECTION A (40 MARKS)**

**Answer ALL the questions in SECTION**

1. Mention two devices that can connected to the computer via HDMI cable (2marks)

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1. State three ways in which ICT can be used to enhance customer service delivery in a supermarket

 (3marks)

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1. List two types of job opportunities that are available in the field of computer hardware (2marks)

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1. Mr. Kamau is a teacher at Chianda High School used Ms-Excel to process the marks obtained by his student during the term. The table below shows the details entered in the Ms-Excel worksheet

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | A | B | C | D | E | F | G | H | I |
| **1** | **Name** | **CAT 1** | **CAT 2** | **CAT TOTAL** |  **EXAM** | **TOTAL MARKS** | **POSITION** | **GRADE** | **REMARK** |
| **2** | **Mark Jama** | **14** | **06** | **20** | **56** | 76 | **1** |  |  |
| **3** | **Caleb Wekeza** | **13** | **08** | **21** | **34** | **55** | **6** |  |  |
| **4** | **Kanini Mulue** | **10** | **04** | **14** | **59** | **73** | **3** |  |  |
| **5** | **Justine Melanie** | **11** | **07** | **18** | **57** | **75** | **2** |  |  |
| **6** | **Julia Wahome** | **06** | **09** | **15** | **48** | **63** | **5** |  |  |
| **7** | **Austin Kilome**  | **08** | **07** | **15** | **50** | **65** | **4** |  |  |

**Hints**

**CAT1is out 15, CAT2 is out 15 and Exam is out 70**

1. Give the formula used to calculate the Total Marks for Julia Wahome (1mark)

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(b)Write a function that gives each student his position in class based on the performance (2 marks)

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

(c) Write a logical function that will display the following remarks in column I (2marks)

|  |  |
| --- | --- |
| **Total Marks** | **Remark** |
| **0 - 49** | **Fail** |
| **50 - 59** | **Above Average** |
| **60 - 69** | **Fair** |
| **70 - 79** | **Good** |
| **80 - 100** | **Excellent** |

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1. Give two reasons to justify why SATA cables are used in modern computers to connect the hard disk to the motherboard (2marks)

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1. Give three file systems supported by windows operating system (3marks)

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1. Describe the use of the following keys found on a standard keyboard (2marks)
2. Esc

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1. Prt sc

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1. Explain the following terms with references to algorithm
2. Definiteness (2marks)

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1. Finiteness (2marks)

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1. Mention two ICT related courses offered in Kenyan universities at undergraduate level (2marks)

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1. What is flaming (2marks)

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1. A Principal of a school wishes his school to have an internet connection in a bid to improve its service delivery. Mention three internet connectivity requirements that must be present to enable the connection.

(3marks)

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1. Identify two limitations of traditional approach to system development (2marks)

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1. Use flowchart to demonstrate how IF THEN and REPEAT...... UNTIL can be implemented (2marks)

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1. State three functions of Repeater stations in data communication (3marks)

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1. Describe three layout guides available in DTP that assist a user to place an object in a preferred position

 (3marks)

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**SECTION B (60 MARKS)**

1. a)State three features of a compiler (3marks)

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1. When writing a computer program programmers are always advised to use approaches and techniques that make the program easy to follow and maintain. List four ways in which a programmer can make program code easy to follow (4marks)

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1. Study the flowchart below and use it to answer the questions that follow

Start

Input a, b

Add 1 to a

Add 1 to b

Yes

T=a2+b2

No

T > 90

Print a, b

Stop

1. Given that the user keyed in 3 as the value of a and 1 as the value of b get the final output of the flowchart

(3marks)

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1. Use a pseudo code to represent the flowchart in (c) (5marks)
2. a) Briefly describe the three main coding schemes (3marks)

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1. Convert the following numbers to binary number
2. B2.AAH (3marks)

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1. $\frac{13}{64}$ base 10 (3marks)

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

1. The table below was created using Ms-Access use it to answer the questions that follow

Table Name: Product

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Product ID | Product Name | Unit Cost | Quantity  | Total |
| P00101 | Milk | 120 | 34 | 4080 |
| P00201 | Bread | 100 | 56 | 5600 |
| P00301 | Beans | 150 | 45 | 6750 |

1. State the most appropriate data type for Product ID and Total (2marks)

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1. Suggest how you would set the input mask for the Product Name so that the data entered in that field appear the way they are in the table (2marks)

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1. Represent the dynaset shown below in a SQL form given that the table Name is product (2marks)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Product ID | Product Name | Unit Cost | Quantity  | Total |
| P00101 | Milk | 120 | 34 | 4080 |

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

1. a) Describe four services available in the internet that support business (4marks)

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1. Modern computing has embraced the use of drop box, google drive and OneDrive. These platforms are hosted by the internet and many computer users prefer backing up their data using these facilities. Give three reasons to justify this phenomenon (3marks)

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1. Jeff a computer student from Ramba High school launched the browser to access the internet , the browser displayed an error message Server Not Found on the screen this didn’t allow Jeff to access the internet. State three possible causes of this anomaly (3marks)

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1. Briefly describe the following features of word processor (2marks)
2. Subscript

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1. Drop cap

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

1. State two arithmetic operation that can be performed on a row of a numeric data in a word processor table

(1 mark)

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1. In each case of (e) above give the expression used (2marks)

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1. a) Enumerate four breakthroughs in health care instigated by ICT (4marks)

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1. Mention four application areas of Artificial Intelligence (3marks)

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1. List three scanning devices available at Electronic Point Sale Terminal (3marks)

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1. Describe two ways of preventing eavesdropping (2marks)

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1. System failure is considered as threat to data security. Describe three measures an organization should put in place to guard against system failure (3marks)

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1. a) Identify modes of data communication represented in (i), (ii), (iii) and (iv) below (4marks)
2. Principal Addressing students in assembly using public address system

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1. WhatsApp chat

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

1. Phone conversation

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

1. Walkie talkie conversation

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1. List three challenges experienced by computer networks that are set up using twisted pair cables (3marks)

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1. Study the diagram below and use it to answer the questions that follow



1. Identify the parts labelled A, B and C in the diagram above (3marks)

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1. State function of the part labelled A (2marks)

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1. Name any three components of virtual reality (3marks)

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