**Term 1 – 2023 OPENER EXAM**

**COMPUTER STUDIES (451/1)**

**PAPER 1**

**FORM FOUR (4)**

**Time: 2 ½ Hours**

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

**School**: ……………………………………………………….. **Class**: …………………..

**Signature**: …………………………………………………….. **Date**: …………………...

**INSTRUCTION TO CANDIDATES**

* Write your name and index number in the spaces provided above
* This paper consists of **Two** sections **A** and **B**
* Answer **ALL** questions in section **A**
* Answer question16 and any other **THREE** questions from section **B**
* All answers should be written in the spaces provided on the question paper

**FOR EXAMINER’S USE ONLY**

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

**SECTION A (40 MARKS)**

**Answer ALL the questions in SECTION**

1. Give three measures an organization need to put in place to prevent threats from sabotage **(3marks)**

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1. Describe any three types of data that can be accepted in spreadsheet cells (**3marks**)

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1. Mention three factors to consider before installing an operating system in a computer **(3marks)**

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1. Enumerate three data management tools available in spreadsheet **(3marks)**

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1. Describe three ways in which ICT can be used to run a taxi business in a busy town like Nairobi **(3marks)**

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1. State a stage in system development life cycle where each of the following activities are carried out **(3marks)**
2. Performing system audit

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1. Listing hardware and software requirement of the system

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1. Establishing whether the system to be developed is cost effective

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1. Convert the decimal number 30 to its binary equivalent **(3marks)**

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1. Briefly describe three ways in which internet platforms have revolutionized business activities **(3marks)**

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1. Give three ways of preventing transcription errors during data entry **(3marks)**

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1. Describe the term desk checking as used in computer programming **(1mark)**

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1. Describe three security services offered by the operating system in a computer **(3marks)**

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1. When an image inserted in a desktop publishing document is selected, handlers on its place holder appears. State two uses of these handlers **(2marks)**

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1. Use flowcharts to demonstrate two ways of implementing a For loop in a program **(2marks)**

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1. Use appropriate example to explain how records are accessed in sequential file organization using binary search method **(3marks)**

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1. Write down the correct syntax for each of the following Excel functions given that C1,C2,C3,C4 and C5 contain 50,60,45,56 and 10 respectively **(2marks)**
2. RANK

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1. COUNTIF

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**SECTION B (60 MARKS)**

1. Describe the following terms as used in programming **(3marks)**
2. Hardware oriented

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1. Syntax

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1. Bug

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1. When writing a computer program programmers are always advised to use approaches and techniques that makes 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. A bookshop owner contracted a programmer to design a program that can be used to manage book orders in his business as follows;

* Enter the order ID and Order amount
* Calculate the discount and New order amount

The book shop gives a discount of 13% for orders of a books worth Ksh.5, 000, 8% for orders of books worth Ksh.1000 and none for orders worth Ksh.1,000 and below.

Draw a flowchart to represent the information above, display the discount and new order amount **(8 marks)**

1. List the process used by the computer to perform the following arithmetic operations **(3marks)**
2. Addition

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1. Multiplication

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1. Subtraction

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1. Convert the following numbers to binary number
2. 10AH **(3marks)**

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1. base 10 **(3marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Perform the binary arithmetic below and write your answer in decimal notation **(3marks)**

**00011012+0001112-0010112**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Identify three ways of representing negative signed binary numbers **(3marks)**

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1. Give four ways of in which parents can protect their children from accessing inappropriate content from the internet **(4marks)**

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1. Due to the risks involved in using the traditional classroom teaching method during this covid-19 period, many colleges have embraced online teaching via Zoom, google classroom and Webex. Mention four items that a student must have in order to attend lessons through the platforms indicated above **(4marks)**

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1. Briefly describe four benefits of backing up data in your phone in the clouds **(4marks)**

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1. Explain the following types of security threat **(3marks)**
2. Malware attack

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1. Social Engineering

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1. System failure

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1. Repetitive Strain and eye strain may results from use of computers. State two ways of minimizing each of the mentioned health problems **(4marks)**

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1. Describe the effects of the following actions in a computer laboratory **(3marks)**
2. Drinking Tea

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1. Cleaning the computers with soft cloth soaked in water

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1. Smoking

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1. Mr. J.O Were the Principal and the Basketball coach of Kisumu Day High school wants to invite several schools for Basketball tournament .He was advised to use mail merging technique to create invitation letters for the respective schools identified. Give three benefits of this technique **(3marks)**

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1. A student from Maranda High School was typing a document using Ms-word. He typed Maseno School as the title of the document. He was requested by his teacher to insert High in between Maseno and School. Explain what will happen if the Ms-word editing mode is set to type over **(2marks)**

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1. Name three transformation techniques supported by Ms-Word which enable users to format graphic and fit them nicely in a document **(3marks)**

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1. Study Table A and B then use it to answer questions that follows

|  |
| --- |
| **Field Name** |
| ID Number |
| Last Name |
| First Name |
| Address |
| Town |

|  |
| --- |
| **Field Name** |
| ID Number |
| Product ID |
| Product Name |
| Unit cost |
| Quantity |
| Date of Birth |
| Total |

**Table I Table II**

1. Identify the most appropriate data type for ID Number, Product Name and Quantity **(3marks)**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Given that the data type for Total is calculated write an expression to be entered in the expression builder **(2marks)**

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1. Suggest how date birth can be validated to restrict entries of date that follow in 2010 only **(2marks)**

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1. Explain how a relation can be created between Table A and B **(2marks)**

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1. State the difference between a line printer and page printer **(2marks)**

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1. List four features of a Laser printer **(4marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**