**Kenya Certificate of Secondary Education**

**MID TERM SERIES**

**CODE451/1 SUBJECT: COMPUTER STUDIES Paper 1**

**TIME 2Hours**

**Name**: …………………………………………….…… **Index** **No**: ……….……

**Class**: ………………**Candidate’s** **Signature**: …….……..**Date**: …..…/0..../2022.

**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. A programmer always uses command line operating system more than the other types of operating systems. State two reasons why he likes this type of operating system **(2marks)**

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1. Biometric systems is used for both physical and data security. State three disadvantages of using biometric systems (**3marks**)

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1. What is automatic recalculation **(2marks)**

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1. State three causes of data loss in computing **(3marks)**

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1. List two precautions taken against crashing of hard disk **(2marks)**

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1. Differentiate between COM ports and LPT ports **(2marks)**

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1. Describe three main parts of a file Name **(3marks)**

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1. Ventilation is an important practice in the computer lab because it enhances proper circulation of air. Outline three ways in which air is regulated in the computer room. **(3marks)**

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1. Warranty must be signed during the purchase of a computer. Name three items a buyer must consider before signing the warranty **(3marks)**

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1. Mention two cause of system entropy **(2marks)**

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1. Explain why two’s complement is preferred to one’s complement in computing. **(1marks)**

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1. Computers have evolved through a number of generations. List three limitations of the first generation of computers. **(3marks)**

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1. Identify the type of operating system represented in Figure 1 and 2 **(2marks)**

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| --- | --- |
| **C:\Users\Jalweny\Desktop\Menu driven interface.png**  **Figure 1** | *C:\Users\Jalweny\Desktop\GUI.jpg*  **Figure 2** |

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1. Give two benefits of writing a program in Low Level programming Language **(2marks)**

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1. State four function of an operating system in respect to disk management **(4marks)**

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1. Due to rapid changes in Technology the World is slowly moving from the magnetic and optical storage devices to solid state storage devices
2. Define the term solid state storage devices **(1mark)**

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1. Give two advantages of solid state storage devices **(2marks)**

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**SECTION B (60 MARKS)**

1. State three basic types of program control structures **(3marks)**

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1. Mention three causes of syntax errors **(3marks)**

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1. An organization intends to increase salaries of employees using the following rates

|  |  |
| --- | --- |
| Current Salary | Percentage Increase |
| Greater than or equal to 70000 | 5% |
| Greater than 50,000 and less than 70,000 | 8% |
| Less than or Equal to 50,000 | 10% |

Design a flowchart that reads the total population of the employee in the organization and the perform the following for each employee **(9marks)**

* Read the current salary
* Compute the increment
* Display current Salary , Increment and the new salary

1. Convert the following numbers to their decimal equivalent **(6marks)**
2. 11.0112

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1. 12.158

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1. A1H

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1. Outline four ways in which data integrity may be maintained **(4marks)**

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1. Explain three advantages of using questionnaires as a fact finding tool**.(3marks)**

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1. What is the role of a recycle bin **(2marks)**

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1. Masai teacher’s college has decided to automate its library for effective services to the students. Identify four methods they are likely to use to gather information during system development. **(4marks)**

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1. What do the following terms mean in relation to internet? **(5marks)**
2. Downloading

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1. Hyperlink

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1. Web browser

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1. ISP

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1. Search engine

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1. Differentiate between sorting and filtering as used in electronic spreadsheet program **(2marks)**

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1. What do the following terms mean **(4maks)**
2. Spam mails

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1. Inbox

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1. Onboard Modem

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1. WIMP

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1. Mention three types of database model **(3marks)**

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1. List three advantages of using database management systems **(3marks)**

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1. In a database system, data integrity ensures the correctness and completeness of the data in the database. Differentiate the following types of integrity constraints: **(3marks)**
2. Domain Integrity

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1. Entity Integrity

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1. Referential Integrity

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1. Use diagrams to describe the following types of relationships **(3marks)**
2. One to One

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1. Many to Many

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1. One to Many

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1. File organization refers to the arrangement of records on secondary storage. Briefly describe the following file organization methods. **(3marks)**
2. Serial

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1. Sequential

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1. Random

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1. What is a website **(2marks)**

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1. Name three facilities that are needed to connect to the internet**.(3marks)**

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1. State three ways students can benefit by having internet in a school **(3marks)**

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1. State the function of the following protocols **(3marks)**
2. TCP

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1. IP

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1. POP3

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1. Describe the following topologies **(4marks)**
2. Ring

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1. Mesh

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