**CHAMPIONS JET EVALUATION TERM ONE 2019**

***Kenya Certificate of Secondary Education (K.C.S.E)***

451/1

**COMPUTER STUDIES**

PAPER 1

March 2019

TIME: 2 1/2 HOURS

**MARKING SCHEME**

**SECTION A (40 MARKS)**

|  |  |  |
| --- | --- | --- |
| **NO** | **QUESTION / ANSWER** | **SCORE REMARK** |
| **1** | ***1.Anthony a student at Mireri Technical College defines a computer as “an electronic device which accepts, processes data and produce information depending on its decisions.” Was this student*** ***right? Explain your answer.***   * No 1/2 computers cannot1/2 make their own decisions | **1mk** |
| **2** | ***Output from the computer can normally be in several forms. Give the difference between Soft copy and Hard copy***.   * Soft copy output that is intangible e.g. sound light and on screen. * - Hardcopy —output on hard /tangible materials e.g. papers and microfor m | **2mks** |
| **3** | ***Define the program documentation***   * Tutorials, instruction and reference information provided to explain how to install and use, and maintain software | **2mks** |
| **4** | ***State any two types of documentation created in system development***   * Programmer oriented * User oriented * Technician oriented. | **Any two @ 1mk** |
| ***5.*** | ***What is data security?***   * Protection of programs and data in computers and communications systems against unauthorized modification, destruction, disclosure or transfer whether accidental or intentional. | **1mk** |
| ***6.*** | ***Explain any two ways in which computers have been made user-friendly for persons that are physically challenged.***  *Use of voice recognition devices for the handicapped*  *Use Braille*  *Use of magnifies to enlarge output* | **Any two explained @ 2 max 4**  **No 1mk** |
| ***7*** | ***The meaning of the following terms as used in computer data transmission.***  ***(a) Simplex transmission.***   * Date is transmitted in one direction only.   (b***) Half duplex transmission***   * Data is transmitted in two directions but only in one direction at a time.   ***(c) Full duplex transmission***   * Data is exchanged between two devices in both directions simultaneously. | **@1mk each** |
| ***8*** | ***What are the four major parts of a database system?***   * Data * Hardware * Software * Users /liveware | **1 @1mk each** |
| ***9.*** | ***Give the difference between machine language and assembly language***   * Machine language is the computers own binary base language. * Assembly language is a low level language consisting of mnemonic codes and symbolic addresses corresponding to machine language instructions. | **@ 2mrks both must be right to score** |
| ***10*** | ***Define the term robot.***   * Is a computer controlled device that mimics human intelligence in carrying out routine task | **@1mk** |
| ***11*** | ***Differentiate between a drive and a device driver.***   * A drive is a device that is used to read or write information on a computer storage, while device drive is software instructions that enable communication between computer and other devices | **@2mrk both must be right** |
| ***12.*** | ***(a) Differentiate between an electronic spreadsheet and the traditional analysis sheet***  Manual spreadsheet are paper and pen spreadsheets in which error correction is  normally hard while electronic spreadsheets are computer base spreadsheets which are easier to work with.  ***(b) Explain how you would change the name of a worksheet in Microsoft excel***  Right click on the name tab of the worksheet to be renamed, select rename then type the new name | **@2mark both must be right**  **Each step @1mrk. There must be flow** |
| ***13.*** | State **three** reasons why it is important observe safety precautions and practices in a computer laboratory.   * **To product the computers** * **To protect the users** * **To provide conducive environment for computers and users.** | **@1mk each**  **Accept any precaution that protect the user or computer and link.** |
| ***14*** | ***(a) List two examples of desktop publishing softwares.***   * Quarkxpres * PageMaker * Adobe in design * Corel Ventura * Sent page plus * Adobe PageMaker * Microsoft publisher * Corel draw   ***(b) Differentiation between save and save as as used in most windows*** ***applications.***  Save command is used to save changes in an already saved document.  Save as command is used to save a new unnamed document or to save an existing document using a new name. | **Any 1st 2 @ 1mk**  **@2marks both must be right** |
| ***15.*** | ***Define the following internet related terms.***  ***a) Internet protocol***  Set of rules that govern the use of the internet.  ***b) Search engine***  Computer software that compiles list of documents on the World Wide Web and their contents.  ***c) Browser***  Program that allows a computer to locate, down load and display. Document containing text graphics sounds videos, animation located on a computer network.  ***d) E- learning***  Learning over the internet.  ***e) Uniform resource location***.  A method of naming files or place on the internet. | **@1mk** |
|  | ***SECTION B.*** |  |
| ***16.*** | ***16. a. Define the term control structure. (2mks)***  Are block of statements that determine how statements are executed.  ***b. Study the following pseudocode and answer the questions that follow***.  ***Start***  ***N = 0***  ***X = 0***  ***While N < 3***  ***Repeat***  ***X = X + 1***  ***Until X = 2***  ***N = N + 1***  ***End while***  ***Stop***   1. ***Determine the value of N and X. (5mks)***   X = 5, N = 4   1. ***Draw a flowchart of the above pseudocde. (8mks)***   N = 0  X = 0  N <3  Y  X = X + 1  N >=2  Y  N = N +1 | Must show the working each stage @1mk. Else only answer shown award 1mk  Initialization symbol. 1mk  While 1  Process 2  Until 1  Start 1  Flow 1  Logic 1 |
| ***17*** | ***(a) State any three reasons why people may resist the introduction of computers at their place of work. (3mks)***   * Job replacement - brings about elimination of jobs. * Job displacement - process of replacing manpower with computerization * Computer illiteracy - Lack of computer knowledge. * Resistance to change — People want to continue working manually resist new and advanced methods.   ***(b) State two operational methods of an organizational ensuring the security of data. (2mks)***   * Password control * Use of antivirus * Use access levels —filters information that one can view.   ***(c) Explain the components of an expert system. (6mks)***   * Knowledge base: holds information about a particular subject * Inference engine: controls the search for information in the knowledge base * User interface: is the display screen that enables the user interact with system   ***d. Explain the role of feed back in a system. (2mks)***   * Helps the system to adopt to changes in the environment in order to give the expected output. * Helps to see whether the system is achieving its objectives***.***   ***e. List two theories of system development. (2mks)***   * Traditional approach * Rapid application development * Structured approach | **Any 1st 3 @ 1mk each**  **Any 1st two @ 1mk**  **1 @ 2mk award 1mk for state**  **1st @ 2mks**  **Any 1st 2 @ 2mks** |
| ***18*** | ***a Briefly explain the following terms as used in spreadsheet (4mks)***   * Cell — An intersection between a row and a column * Range — A rectangular arrangement of cells specified by the address of its top left and bottom right cells, separated by colon (:) * Value — Numbers that can be manipulated mathematically. * Function: Inbuilt predefined formulae that the user can quickly use instead of having to create a new one each time a calculation has to be carried out.   ***b. List three paragraph formatting features of word processors. (3mks)***   * Indentation * Drop cap * Alignment * Line spacing   ***c. Explain the difference between the printing of multiple pages and multiple copies. (2mks)***   * Printing more than one page * Printing several copies of the same page   **d. Distinguish between a worksheet and a work book (2mk)**   * Work sheet is the working area in Microsoft Excel program. Work book is a collection of worksheet.   ***e. Explain four examples of action query. (4mks)***   * make table query: used to create query from existing table * Delete query: used to automatically delete record or records from the source data. * Append query: used to automatically add a record or records to a table * Update query: used to automatically update records | **Each @ 1mk** |
| ***19*** | ***a .Explain any three benefits of using ATMs in banking industry. (6mks)***   * Can be accessed at any branch * Easy transaction and convenient as they can be used to pay bills * No much queuing as in case of bank clarks * Confidentiality of transaction   ***b. Explain two advantages of advertising on web instead of using an advertising brochure. (4mks***)   * Can be updated faster * Provide interactive communication as compared to brochures that are one way * Have wide coverage * Possible use of multi media   ***c. Mention any three ways of ensuring efficient back up of data. (3mks)***   * Making regular backup * Backup on removable media * Keeping backup media in separate location * Setting up automatic backup intervals   ***d. Give any two benefit of hacking to an organization’s computer system. (2mks)***  reveals the weaknesses of the system  identify areas that need patching  may explain leakage incidences of data | **Any 1st three explained @ 2mk**  **Any 1st 2 explained @ 2mks**  **Any 1st 3@1mk each** |
| ***20*** | **a. Perform the following binary arithmetic.**  **i. 10111012 + 1011002 - 11111012 (4mks)**   * 1011101 + 101100 = 10001001……….2mks * 10001001 – 1111101= 00001101……..2mks   **ii. 5 - 8 using ones complement. (4mks)**  5.75 – 8.25  101.11 – 1000.01…….1mk  Ones complement of 1000.01……0111.10…….1mk  101.11 + 0111.10……..1101.11………1mk  Back to ones complement 0010.01…..1mk  **b. Differentiate between data validation and data verification.(2mks)**  data verification is the checking data input manually comparing the input with source data, while data validation is the checking of data against predetermined data limit.  ***c. List three factors that determine the methods of data access in a computer. (3mks)***   * The amount of data to be accessed at a time * The size of the file to be accessed * The type of storage media   **d. Give any two characteristics of mater file. (2mks)**  Contain permanent data  Always updated by transaction file | **Both must be correct to score** |