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

Candidate’s Signature:……………………………………………… Date: ……………….…………..…..................

451/1

**COMPUTER STUDIES**

Paper 1

Theory

October / November - 2017

**Time: 2 ½ Hours**

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

**INSTRUCTIONS TO CANDIDATES**

* Write **your Name** and **index Number** in the spaces provided above.
* This paper consists of **two** sections **A & B.**
* Answer **ALL** the questions in section **A**.
* Answer question **16** 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** | **QUESTION** | **MAXIMUM SCORE** | **CANDIDATE’S SCORE** |
| **A** | 1-15 | 40 |  |
| **B** | 16 | 15 |  |
| 17 | 15 |  |
| 18 | 15 |  |
| 19 | 15 |  |
| 20 | 15 |  |
| **Total Score** |  | 100 |  |

*This paper consists of 10 printed pages. Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.*

**SECTION A (40 MARKS)**

***Answer ALL questions in this section in the spaces provided***

1***.*** (a) State **two** ways of minimizing dust in the computer laboratory. (2marks)

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(b) Why should **one** switch on the ups before switching on the system unit and the monitor. (1mark)

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2. State the **three** parts of the processor. (3marks)

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3. (a) Perform the following binary addition 1010 + 0111 (1mark)

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(b) Convert 101100000101012 (2marks)

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4. State the following types of transcription errors.

(a) 1245 instead of 124S (letters) (1mark)

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(b) Borad instead of Board (1mark)

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5. (a) What is meant by the term data integrity as used in computing? (1mark)

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(b) State **two** ways of enhancing the integrity of data (2marks)

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6. Distinguish between count and count If as used in spreadsheets (2marks)

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7. Apart from the system unit, monitor, keyboard and mouse, state other four hardware requirements for video conferencing. (2marks)

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8. State **three** ways of moving round the page in a desktop publishing window (3mks)

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9. Differentiate between user documentation and Technical documentation (2marks)

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10. Suggest three reasons that would make workers in an organization unhappy with introduction of a computerized system. (3marks)

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11. Explain the following internet related terms (4marks)

(a) Sign in

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(b) Search engine

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(c) Surf

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(d) Sign up

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12. State **two** functions of a compiler. (2marks)

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13. State **three** factors that have led to slow growth of e-learning in Kenyan schools. (3marks)

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14. List **four** jobs associated with training in ICT. (2marks)

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15. (a) What is meant by the term suite as used in application programs? (1mark)

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(b) List **two** programs under the MS office suite. (1mark)

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(c) Differentiate between system flow chart and program flow chart. (2marks)

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***SECTION B (60 MARKS)***

***Answer question 16 (Compulsory) and any other three questions from this section***

16. (a) List **four** characteristics of first generation languages. (4marks)

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(b) Write a pseudocode for a program that can accept the age of students and count the number of students in a class. The program should calculate the average age of the group of students. The data entry is terminated by the value 999. The program should print the number of students in the class and the average of the students. (6marks)

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Draw a flowchart for the psedocode above. (5marks)

17. (a) Distinguish between a mail server and mail client. (2marks)

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(b) What is uniform resource locator? (1mark)

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(c) Explain the following terms (4marks)

(i) Hypertext

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(ii) hypermedia

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(iii) hyperlink

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(iv) FTP

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(d) Distinguish between uploading and downloading. (2marks)

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e) List **three** functions of a browser. (3marks)

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(f) Name **three** basic elements of an e-mail compose window. (3marks)

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18. (a) The following are some of the phases in the systems development life cycle (SDLC) system analysis, system design, system implementation, system review and maintenance . State four activities that are carried out during the system implementation phase (4mks)

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(b) Give **three** reasons why system maintenance phase is necessary in SDLC (3mks)

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(c) State **two** instances where observation is not viable method of gathering information during system analysis stage (2mks)

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(d) Various considerations should be made during input design and output design. State three considerations for each case (6mks)

(i) Input design.

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(ii) Output design.

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19. ( a) List **six** ways in which data integrity can be compromised. (6marks)

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b) Distinguish between spyware and antispyware. (2marks)

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c) Describe biometric security. (2marks)

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d) Give five general rules that must be observed to keep within the law when working with data and information. (5marks)

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20. a) A student at booker academy has a document of 10GB in a hard disk. He wants to transfer that document into a floppy disk of 1.44MB. Determine the number of floppy disks he requires. (3marks)

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b) List two differences between buffers and registers (2marks)

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c) State any three disadvantages of a magnetic diskette. (3marks)

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d) Highlight four characteristics of a flash memory. (4marks)

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