**BUURI EAST STANDARDS**

***Kenya Certificate of Secondary Education***

**MARKING SCHEME PAPER 1**

**COMPUTER**

**SECTION A: (40 MARKS)**

1. (i) Validity integrity: Checks if the data entered in the database matches the column

data type.

 (ii) Entity integrity: ensures that field property specified for a field is met. (3 mks)

 (iii) Referential integrity: ensures that if any changes are made on the parent table it is

reflected on the child’s table.

-Also ensures that no change is made on the child’s table before the parent’s table.

2. (a) Utility software: They are programs that perform commonly used services that

make certain aspect of computing to go on more smoothly.

 (b) -system level -setting editor -Back up (2 mks)

 -Application utility -Text editor -Anti-virus

 -Program translator -sort editor -Diagnostic

 -Calculator -Time -Calendar

3. (a) Data verification: is checking the data input manually by comparing using rules

laid down in the program.

4. Expert systems -computer vision

 -Natural language processing - Neural works (3 mks)

 -voice recognition -Robotics

 -voice synthesis

5. -The internet provides numerous online academic materials.

Distance learning is available enabling people to register for a course, read notes, discuss with lecturers and peers and even sit for examinations online. (3 mks)

6. The overtype mode is where the typed character inserted at the cursor position deletes the character on the right of the cursor. (2 mks)

7. (a) -Optical Mark Recognition (OMR) (1 mk)

 - Optical Barcode Reognition (OBR)

 - Optical Character Recognition (OCR)

 (b) -Its fast, accurate and automatic

 -The codes are both machine and human readable

 -Reduces forgery .i.e It’s difficult to forge (2 mks)

8. (a) Merge: helps in combining files

 (b) Compressor: Reduces the space occupied by a file hence creating more space for

other files. (3 mks)

 (c ) Anti-virus: Detects and cleans viruses.

9. -Buffers are found in input/output devices while registers are found inside the CPU.

 -Buffers store massive piece of data compared to registers which store one piece of data

at a time. (2 mks)

10. (a) A computer file is a collection of related records or data items holding

information of a certain item or entity (2 mks)

 (b) - Master file

 - Transaction file

 - Reference file

 -Back up file

 - Sort file (2 mks)

11. (a) 1101 0001 01012 to denary

 = 334910

 (b) 1101 0001 01012 to two complement

 = 00101110 10112

12. Password is a code that must be keyed in so as to access a file or a system. (3 mks)

Data encryption: is mixing up data in a way that only the sender and the receiver are able to understand.

13. Fraud refers to use of computer, to impersonate others with an aim of gaining/benefiting unfairly. (1 mk)

14. Peripheral devices are those connected to the system unit through the port. (2 mks)

 - Mouse - printer

 - Keyboard - Monitor

15. -Using the restart button

 -Press CTRL + ALT + DEL on the keyboard (2 mks)

 -Using the operating system command

**SECTION B – (60 MARKS)**

16. (a) (i) Algorithm – refers to number of logical steps used to solve a problem

through programming.

 (ii) Sentinel – is a value which when read causes a program to immediately

exit from a loop.

Read x

Sum = sum + x

Count = count + 1

Sentinel?

 no

 yes

Average = sum/count

Print:s sum, AVG

 (c ) BEGIN PROGRAM

 PRINT “Enter the number X”

 READ X

 Sum = Sum + X

 COUNT = Count + 1

 IF X = Sentinel THEN

 Av= SUM/COUNT

 ELSE

 READ X

 ENDIF

 PRINT SUM;

 AVG

 END PROGRAM

17. (a) (i) Hyperlink: is a link that creates interconnection between web pages (1 mk)

 (ii) WWW – World wide web: These are pages with sum total of all the

information in the internet. (2 mks)

1. Keyboard keys

(i) Alphanumeric keys A,B,C ---Z

(ii) Numeric keys 1,2,3 ----0

(iii) Functions keys F1, F2 ---F12

(iv) Navigation keys Arrows, page up, page down

(v) Editing keys Del, Insert

(vi) Special purpose keys Ctrl, Alt, Esc

 (c ) (i) Minimized background light

 -This will avoid eyestrain, stress and fatigue caused by radiations (1 mk)

 (ii) Enough ventilation: There will be good air circulation in the computer

room to avoid suffocation and overheating. (2 mks)

 (d) -Report to the teacher

 -Switch off the main switch (2 mks)

 (e) Walk out in an orderly manner

 - use fire extinguisher to put off the fire (2 mks)

18. (a) (i) Margin: These are two blank space around the edge of a page

 (ii) Drop Cap: It is a large dropped initial capital letter in a word or sentence.

(3 mks)

 (iii) Word wrap: This is a feature in a word processor that automatically

moves the cursor or text to the next line once the right/left margins is reached. (3 mks)

 (b)

|  |  |
| --- | --- |
| Word processor | Typewritter |
| -Document can be stored for future reference and reprints-Typing is easier because of automated carriage return (word wrap)-Has proofreading tools such as spell checker-Typing is faster because of auto complete features -Superior document formatting features available.-Easy to work with graphics | -Requires retyping-Typing is tedious since carriage return is manual- Has no proofreading tools-Typing is slow since there is not auto complete features-Limited formatting features- Difficult to work with graphics |

(6 mks)

1. Advantages of interview

-the analyst is accessible to first class information (3 mks)

-make interviewee feel as part of the system

-Give adequate opportunity for interviewee, to put forward opinions.

Disadvantages

-Make interviewees feel they are being summoned by the analysts.

-Some interviewees give answers which are not actually proven facts but opinions.

-The interviewees may not fully open on some issues that may be. (3 mks)

19. (a) ● Diploma or Certificate in Information Technology (2 mks)

 ● Diploma or Certificate in Electrical and Electronic Engineering

(b) User interface: It refers to those aspects of the system that the user comes into contact with. (6 mks)

 -Knowledge base: This consists of the expert system’s database of knowledge containing all information relevant to the system.

 -Inference engine: These are the programs that direct the search for the knowledge in the database and makes judgement.

(c ) Diploma

 Higher National Diploma

 Doctorate degree (PhD) (3 mks)

1. Job Creation: It has created job opportunities for experts such as system analyst

and programmers.

 Job replacement: It has let to loss of Jobs after automation of tasks, some employees

have been rendered redundant.

 Job displacement: It has led to the deployment of computer illiterate staff to

departments where the tasks performed do not require computer skills.

20. (a) (i) = 1110 .0002 (3 mks)

 (ii) = 0111.0002  (3 mks)

 (b) (i) 0.100100002 (3 mks)

 (ii) = 0.01012  (3 mks)

 (c ) =(i) 00102 (3 mks)