

# MUTITO FORM FOUR JOINT EVALUATION TEST

Kenya Certificate of Secondary Education

451/1

COMPUTER STUDIES

PAPER 1

(THEORY)

## MARKING SCHEME

1. To avoid loss of data.  
To avoid damage of programs.  
To avoid damage of computer parts. *(Any 2 correct @ 1 mark total of 2mrks)*
  
2. a) Not portable  
- Consume a lot of heat.  
- Cheap  
- Curved screen *(Any 4 correct @ 1/2 mark total of 2mrks)*  
  
 b) Liquid Crystal Display (LCD)  
Thin film Transistor (TFT)  
Gas Plasma *(Any 2 correct @ 1 mrk = 2 mrks )*
  
3. Massive capacity.  
Stores data permanently  
Secure  
High quality picture & sound. *(Any 4 correct @ 1/2 mrks = 2 mrks)*
  
4. May not meet special needs  
Not efficient  
Changes leads to extra cost.  
Not all packages are compatible. *(Any 4 correct @ 1/2 marks = 2 marks)*
  
5. Command line: - Users interact by typing a command at the prompt.  
Menu driven interface: - Allows users to select commands from a list  
Graphical user interface: - Users click on commands represented as a picture. *(Name and explain @ 1mrk total = 3mrks)*
  
6. i) Insert mode – Text inserted between words or characters. Pushes existing text away without replacing it.  
Type over mode:- Text typed automatically replaces the existing text. *(correct @ 1mrk = 2 marks)*  
  
 ii) Alignment:- it's how text is lined on the page relative to left, right or center of the page.  
Indentation:- Moving the text away from the margin. *(Correct @ 1mrk = 2 marks)*
  
7. a) i) SUM IF :- Adds values in the cells specified by a given criteria.  
ii) COUNT :- returns the number of cells within a specified range that meet the given condition. *2 marks*  
  
 b) Feature involving changing the value of one argument in a formula to see the change it would make on the calculation. *(correct = 2marks)*
  
8. Bound: - The source of data is a field is a table/query.

- Unbound:- Control is connected to any data source  
 (correct @ 1 = 2 marks)
9. Using hand tool.  
 Using scroll ball.  
 Using zoom tool. (Any 3 correct @ 1mrk Total = 3mrks)
10. Crimes are very complex  
 Difficult to find a clear trail of evidence.  
 No witness to compute crimes.  
 Law enforcement is not efficient. (Any 4 correct @ 1/2 mrk = 2 marks)
11. Suitability of communicating data  
 Responses time.  
 Initial cost of installation.  
 Control over resources. (Any 4 correct @ 1/2 marks = 2 marks)
12. a) Costly due to redundant cables.  
 Difficulty to install and maintain. (Any correct 2 @ 1/2 mark = 1 mark)
- b) Make sharing of resources possible.  
 Transmitting data  
 Responds to request (Any 2 correct @ 1/2 mark = 1 mark)
13. a) Ability of a computer to think and reason like human being. (Correct total 1 mark)
- b) Expert systems.  
 Computer vision.  
 Neural network  
 Robotics (Any 4 correct @ 1/2 marks = 2 marks)
14. a) Smaller in size  
 High speed  
 Improved use interface  
 More intelligent (Any 4 correct @ 1/2 mark = 2marks)
- b) Increased efficiency  
 Improve customer service  
 Reduce cost (Any 2 correct @ 1/2 mark = 1 marks)
15. System analyst  
 We designer  
 Programming (Any 3 correct @ 1 mark total 3marks)

16.

a) Start	Start/Stop	@ ½ mrk = 1
Print "Enter A)	Input	= 1mrk
Input A	decision if ... Then	= 1mrk
Initialize A, ADD	Process ADD = ADD +A	
A = 11	A = (A + ADD	= 2mrks
ADD = 0		
If A < 100 THEN		
End If	End IF	= 1mrk
A = (A + ADD)2		
STOP	Out put	= 1mrk

- b) Add = 11, A = 11, A = 16 ½ , A = 22, A = 35 ½  
 ADD = 22, ADD = 27 ½ , ADD 49 ½

@ Correct 1mrk = 8mrks

17. Simulation is the designing of models either an actual or theoretical physical term and analyzing its execution using a computer.

**Correct total 1 marks**

- b) Training pilots  
 Medicine  
 Engineering  
 Architectural design

**Any 4 correct @ ½ mrks = 2 marks)**

- c) Indiscipline people won't work.  
 Few opportunities for brainstorming.  
 Direct supervision disappears.  
 Employees with poor attitudes don't work.

**Any 4 correct @ ½ marks = 2 marks)**

- d) Good communication skills  
 Good problem solving skills  
 Knowledge of data processing.  
 Familiar with programming languages.

**Any 4 correct @ ½ marks = 2 marks**

- e) This is the use of electronic device and software to stimulate the neurological structure of the human brain.

**Any correct total 2 marks**

- f) Neurodes can distinguish between what constitutes a signal and what does not.  
 Capable of recognizing patterns in large amount of data.

**Any 2 correct each 1 mark = 2marks**

- g) i) Health Hazards – characterized by eye strain, headaches etc due to improper use of monitors.

**Correct = 2 marks**

- ii) Injuries from wrist, arm and muscle strain, tendonitis and neck strain due to forced repetitive movement.

18. a) i) Involves sub-division of a process into several sub process then each can be processed at different site co- currently hence speeding up entire process.

**Correct 2 marks**

- i) Involves transmission of data signals between two communication devices located at different geographical locations.

**Correct total 2 marks**

- b) Portable  
Convenient **Any 4 correct @ 1/2 mark = 2marks**
- c) Logical – deals with the way data passes from one devices the next on the network.  
Physical – Physical arrangement of devices on the network. **Correct @ 1 mark = 2 marks**
- d) Parallel – Both the old and the new systems run at the same time until gains confidence.  
Direct - Complete replacement of the old systems with the new system  
**Correct @ 1 mark = 2 marks**
- e) File conversion  
Staff training.  
Project management  
Changeover strategies **Any 3 correct @ 1 mark = 3 marks**
19. a) Overflow – occurs when results from calculations is too large to fit in the allocated memory.  
Truncation:- Occurs in case a real number has a long functional part which cannot fit allocated memory space. **Correct and any 2 @ 1 marks 2 marks)**
- b) Back up.  
Enforce security measures  
Use direct data capture devices  
Use error detection & conversion software **Any 4 correct @ 1/2 marks total 2mrks**
- c) Data duplication  
Programming problems.  
Security threats **Any 3 correct @x 1 mark = 3 marks**
- d) Logical file:- This what data items it contains and what processing operations may be preformed.  
Physical file:- Is how data items are found in a file and arranged on a storage media.  
**Correct = 1mrks**
- e) Compilers are fast:- entire source code once.  
Interpreters:- translates a program each time it runs.  
**Correct 2 @ 1 mark = 2 mark**
- f) Dry running  
Translator system checking  
Use of debugging utilities  
Use of test data. **Any 4 correct @ 1/2 marks = 2 marks**
- g) Easy to read  
Easy to run and code  
Easy to modify  
Easy to test  
Flexible **Any 4 correct @ 1/2 mark = 2 marks**
20. a) i) There is use of protocols – rules govern how devices communicate on a network.  
**Correct 2 marks**
- ii) Modem  
Hub  
Gateway  
Repeaters **Any 4 correct @ 1/2 marks = 2 marks**

- b) Enact and enforce copyright laws.  
 Make software cheap.  
 Use licenses & certificates of authenticity.  
 Set installation passwords.

**Any 4 correct @ 1/2 mark = 2 marks**

c)

$$7 = 0111$$

$$A = 1010 \quad 0111101010111110_2$$

$$B = 1011 \quad 1514131211109876543210$$

$$E = 1110 \quad (1 \times 2^{14}) + (1 \times 2^{13}) + (1 \times 2^{12}) + (1 \times 2^{11}) + (1 \times 2^{10}) + (1 \times 2^9) +$$

$$(1 \times 2^8) + (1 \times 2^7) + (1 \times 2^6) + (1 \times 2^5) + (1 \times 2^4) + (1 \times 2^3) + (1 \times 2^2) + (1 \times 2^1)$$

i) 2 | 37

- d) Start button - Provides access to start menu.  
 Task manager - Displays buttons of currently running task.  
 System tray- Display icons of applications that automatically start and run in the background.

**Name and correct explanation @ 1 mark = 3 marks**

- e) Install more operating system.  
 Backups

**Any 2 correct 2 1/2 mark == 1 mark**