
KENYA NATIONAL EXAMINATION COUNCIL
REVISION MOCK EXAMS 2016
TOP NATIONAL SCHOOLS

SACHO HIGH SCHOOL
COMPUTER STUDIES
PAPER 1
MARKING SCHEME


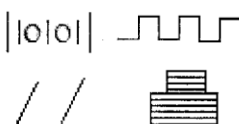
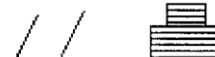
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SACHO HIGH SCHOOL KCSE TRIAL AND PRACTICE EXAM 2016

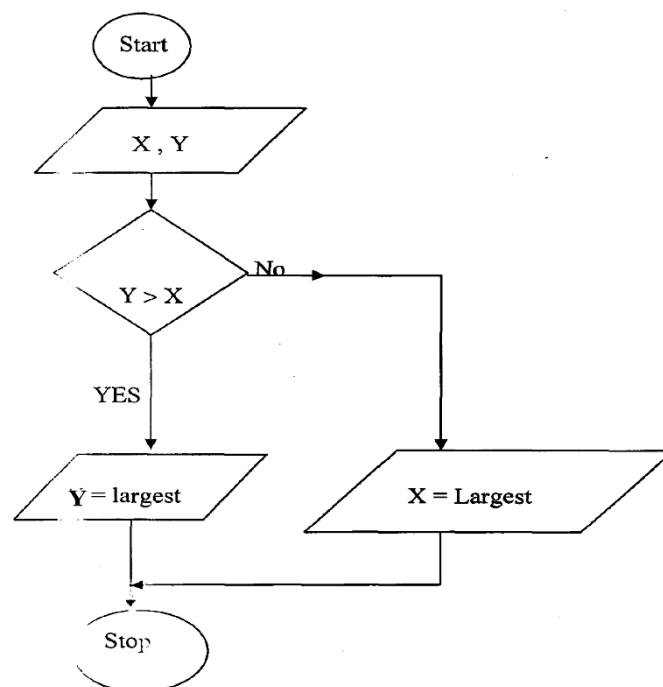
COMPUTER STUDIES

PAPER 1 / 451/1

MARKING SCHEME

1. (i) Desktop computer
(ii) Laptop computer
(iii) Palmtop computer / notebook. (3mks)
2. (i) Computers process data faster
(ii) Computers are more accurate
(iii) Computers are more efficient. (3mks)
3. (a) This is the process of dividing a large physical disk into two or more partitions called logical drives (1mk)
(b) (i) The user may intend to install more than one operating system on the same disk.
(ii) For purpose of backup on the same disk but different partitions.
4. (i) A good computer must have high processor speed. (½ mk)
(ii) It is important to understand the terms and conditions of after selling a product in case of failure or malfunction that is whether the seller is ready to provide after sale services. (½ mk)
(iii) The best convention would be to buy a computer that can easily be upgraded to accommodate emergent technologies. (½ mk)
(iv) Smaller computer enhances mobility. (½ mk)
5. (i) Help in transferring an application from a secondary storage :to a primary storage when running the application. (1mk)
(ii) Help in tracing and removing errors from a program. (1mk)
(iii) Linkers enable several programs (modules) to subroutines to be connected when running (1mk)
6. a) 
b) 
c) 
7. (a) Set a printer as a default.
(b) The printer may have been configured to the wrong port.
(c) Check the picking mechanism of the paper.
(Award 1 mark for each correct answer)
8. (a) Optical scanners capture data using the principle of light. (1mk)
Examples - Optical mark recognition. (½ mk)
- Optical bar recognition (½ mk)
- Optical character recognition
(b) Magnetic scanners capture data by using the principle 2 magnetism.
Examples — MICR (½ mk)
Magnetic strip recognition (½ mk)
9. (ii) It is a feature which enables text to automatically flow to the next line if the end of the current one is reached. (1mk)

- (iii) Thesaurus is a feature used to find synomus and autonymus. (1mk)
10. (a) A robot (award 1mk)
- (b) Incase of explosive the life of human being in control is spared (Award 1mk)
11. - EFT allows customers to do purchases using their ATM and credit cards without involving direct cash system.
- EPOS the prices of the items bought are tagged so that by swapping them on the scanner sends the prices to computer (each 2 mks — total 4mks)
12. A magnetic disk is direct access storage media (DASD) that permits the computer to find data directly on the disk. (2mks)
13. Hard disk provides greater storage capacity than the floppy disk (1 mk)
- Hard disk operates or much higher retrieval speed. (1 mk)
14. Testing is done to find out weather the system meets all requirements defined. (1 mk)
- If is also important to test weather the system has some failure so as to be corrected before Implementation. (1mk)
15. straight changeover
- Parallel changeover
- Phased change over (1mk)
16. a) i) Program code that the programer enters in a program editor window that is nottranslated into a machine readable form.
- ii) Program code that is in machine readable form.
- b) Start:
- print" Enter two number X and Y
- Input X, Y
- If Y > X Then
- Print"
- ESE
- Print X
- End if
- Stop



17. a) Record- a collection a of related fields that represent a single entity
- File - a collection of related records that give a complete set of information about a certain item

Database a collection of related tables s (1 mk each)

- (b) (i) install latest antivirus s/w Scan mail attachments before opening
Scan external storage (devices before opening them
(ii) Cu- coordinates instructions in the cpu
Alu-used to perform arithmetic and logical functions
mm- used for primary storage.

18. a) $747_8 \longleftrightarrow X_2$
 $1,1110,0111_2 \longrightarrow 1147_{10}$
 ~~$1E7_{10}$~~

b) $6_{10} \longrightarrow 110_2$
 Ones compliment of $110_2 \longrightarrow 001_2$

- c) - Not prone to errors
 - Simple systems to use. 2mks

d) Loss of signal strength along a transmission channel after a signal propagates a long distance.

- e) Single mode – type of a fibre optic cable in which only one signal can be propagated through the channel at a time. (2mks)
 Multi – mode – a type of fibre optic cable in which several signals can be transmitted through the channel at a time. (2mks)

f) convert 7.125_{10} to binary

	$7_{10} \longrightarrow X$
	1 7
	2 3 rem 1
	2 1 rem 1
	2 1 rem 1
	0 rem 1 = 111

$0.125_{10} \quad X_2$
 $0.125 \times 2 = 0.25$ carry 0
 $0.125 \times 2 = 0.5$ carry 0
 $0.5 \times 2 = 1.0$ carry 1
 = 0.001

$\therefore 7.125 \quad 111.001_2$

19. i) - E learning
 - Simulation to demonstrate scientific concepts
 - Research on the internet.
 - Computer aided learning (CAL) and computer aided teaching (CAT)
 (1mk for 3mks)
 ii) a) Pressure pads (1mk)
 b) Cheaper than modifying the real object/ system.
 - Enables a detailed insight to a problem.
 - Less dangerous (2mks)
 iii) Software engineer – designs the logic of various programs for performing various tasks.(1mk)
 Computer engineer - designs new hardware devices e.g processor. (1mk)
 iv) Modifying the website.
 Updating the website.
 Troubleshooting and adding information to a website (1mk x 3)
 20. a) i) User interface – Displays screen that enables the user interact with the system.

- ii) Knowledge base – This is the expert systems database of knowledge about a particular subject. It contains relevant facts, beliefs, assumptions and procedures for solving a particular problem.
 - iii) Inference engine – is a software that applies the rules from knowledge base in the data provided by the user to draw conclusion (Award 2mks for each of the three correct options)
 - b)
 - Computer technician
 - Computer engineer (award 1mk for each of the correct answers)
 - c)
 - Swift Kenya
 - Africa on line
 - Today's online
 - Wananchi online
 - Interconnect (Award 1mk for each of three correct options)
 - d)
 - E.mail (electronic mail.) Exchange of electronic letters, data and graphics on the internet.
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- E- learning (Electronic learning) learning through interaction with special programs on the computer.
 - E – Commerce (Electronic Commerce) Trading activities over the network environment.
 - World wide web (www) – Internet server that allows connection of a network to the internet.
(Award 1mk for each of the four correct answers)