Name……………………………………………………………. Adm. No……………

Date …………………………..… Student's Signature………………………..…………..…

451/1
COMPUTER STUDIES
PAPER 1
(THEORY)
MARCH/APRIL 2016
TIME: 2 ½ HRS

MOKASA JOINT EVALUATION EXAMINATION
KenyaCertificate of Secondary Education
(K.C.S.E)

451/1
COMPUTER STUDIES
PAPER 1
(THEORY)
MARCH/APRIL 2016
TIME: 2 ½ HRS

Instructions to candidates
1. This paper consists of TWO sections; A and B
2. Answer all questions in sections A.
3. Answer question 16 and any other THREE questions from section B.

FOR EXAMINERS USE ONLY

SECTION	QUESTION	
A	1 – 15	
B	16	
	17	
	18	
	19	
	20	
	TOTAL MARKS	

This paper consists of 11 printed pages.
Candidates should check to ensure that all pages are printed as indicated and no question is missing.

SECTION A (40 MARKS)

ANSWER ALL QUESTIONS IN THIS SECTION

1. Differentiate between cold booting and warm bootingin computing   (2mks)

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2. Define parallel processing   (1mk)

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3. (a) Mention any TWO reasons why command-based operating systems are not common in today's business computer systems.   (2mks)

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    (b) Explain any THREE functions of an operating system with respect to memorymanagement   (3mks)

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4. Differentiate between partitioning and formatting as used in disk management   (2mks)

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5. Name the type of scanner used to capture data from the following document format below   (1mk)

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6. Computer output can now be in form of spoken words in digitized speech. An example of such application is spell learning devices for children. State ONEadvantage of speech output.   (1mk)

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7. Mention any TWO features that are considered before buying a main memory module. (2mks)

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8. A technician recommended a computer in the principal's office needs upgrading of the CPU. State any TWO reasons that may have necessitated the upgrading of the CPU. (2mks)

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9. StateTWO reasons why secondary storage is preferred to main memory in data storage. (2mks)

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10. (a) State ONE advantage of relational database model over flat files (1mk)

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(b) State TWO uses of primary keys in a database (2mks)

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(c) A database requires data to be defined by assigning data types to fields for purposes of consistent storage. Describeany FOUR data types that can be allowed in MsAccess. (4mks)

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(d) Definethe term macro as used in databases (1mk)

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11. State any ONE reason why USB interface cables are widely used in computing devices (1mk)

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12. A company is considering replacing some of its software, including its word processing package, and to acquire an integrated software package. State **TWO** advantages for the company in usingintegrated software rather than separate packages. (2mks)

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13. (a) State TWO types of DTP software (2mks)

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(b) List FOUR page formatting features in DTP (2mks)

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14. (a) Explain the meaning of "what if analysis" in spreadsheets (2mks)

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(b) The table below shows items consumed by some students for breakfast in a given day.

	A	B	C	D	E	F
1			ITEM COST			
2	NAME		SAUSAGE	TEA	BANANA	TOTAL COST
3			15.00	10.00	5.00	
4	Charles		1	1	2	35
5	Amoit		2	4	2	80
6	David		3	1	2	
7	Okello		2	1	2	50

(i) Using anexpression,find the total expenditure incurred by David (2mks)

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(ii) State what you would obtain from the expression = CountIF (F4:F7, ">45") (1mk)

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15. Define the following terms as used in relation to operating systems (2mks)

(i) Folder

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(ii) Drive

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SECTION B (60 MARKS)
ANSWER QUESTION 16 AND ANY OTHER THREE QUESTIONS FROM THIS SECTION

16. (a) State any THREE advantages of using Object Oriented programming for writing programs (3mks)

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(b) In a computer contest with 40 entries, three papers are tested and the final marks awarded according to the average of the papers. The final marks are then ranked to get position 1, 2 and 3 who are awarded trophy, cash and scholarship, trophy and cash, and cash respectively

Write a program pseudocode and flowchart that will prompt for the name, school and marks for each paper then compute the final marks and rank and display the students name, school, final marks position and award.

     i.   Pseudocode   (5mks)

ii.   Flowchart   (7mks)

17. (a) With the aid of a well labeled diagram, describe control and feedback model in a system   (4mks)

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(b) Distinguish between the following terms as used in system development   (4mks)

    i.   Hard system and soft system

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    ii.   Operational feasibility and technical feasibility

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(c) State THREE ways in which organizations manage system entropy   (3mks)

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(d) Explain any TWO reasons for system maintenance   (1mk)

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(e) Briefly explain THREE ways in which computers can be used in motor vehicle manufacturing companies   (3mks)

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18. (a) Distinguish between the following terms as used in data communication   (4mks)

    i.   Guided transmission and unguided transmission

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ii.   Multiplexing and demultiplexing

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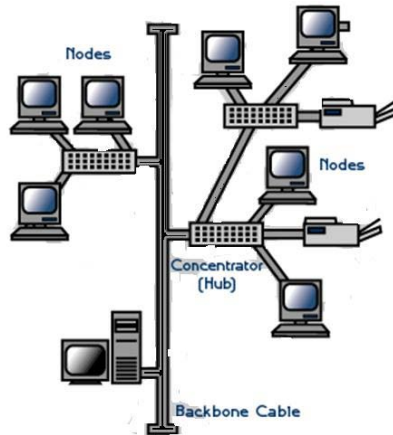
(b) Below is a diagram of a network topology.

i.   Name the above topology   (1mk)

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ii.   State ONE advantages and ONEdisadvantage of using the topology named above   (2mks)

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(c) (i) State TWO ways in which users in an organization can be a security threat to data in an
        information system.   (2mks)

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(ii)Define cyber terrorism   (1mk)

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(d) A school intends to set-up an e-mail. **List FOUR**activities likely to be provided by the e-mail
    facility.   (2mks)

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(e)Define the following terms as used in the internet. (2mks)
  (i)Internet blog

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  (ii) Webportals

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(f) Kenya publishing and printing company wishes to employ an ICT professional to assist in making
publications .State the suitable ICT professional the firm could employ (1mk)

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19. (a) (i)List and explain the THREE types of errors that can occur during data collection stage of data
  processing cycle (3mks)

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  (ii)Distinguish between master file and transaction file (2mks)

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  (iii) Define real time processing (1mk)

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  (iv) Explain a situation where the batch processing would be appropriate (1mk)

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(b) Using twos complement, perform the following operation and give your answer in decimal
notation
  • $777_8 - 25_{10}$(4mks)

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(c) Solve $AC_{16}+101_2=X_2$ (2mks)

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(d) Convert binary number 11010110.1001_2 into octal number.   (2mks)

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20. (a) State any TWO negative effects of introducing robots in a manufacturing plant   (2mks)

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(b) State THREE advantages of using computers   (3mks)

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(c) Name THREE types of special purpose memories used in a computer   (3mks)

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(d)Explain the purpose of the system clock   (2mks)

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(e) (i) In word processing, differentiate between text wrap and word wrap   (2mks)

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(ii) List any THREE types of section breaks used in word.   (3mks)

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