

Name.....

Index No. ....

School .....

451/1

**COMPUTER STUDIES**

**THEORY**

Paper 1

*JULY / AUG .2007*

**Time: 2 ½ Hours**

## **NYAMIRA DISTRICT MOCK EXAMINATION – 2007**

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

451/1

**COMPUTER STUDIES**

**THEORY**

Paper 1

*JULY / AUG .2007*

**Time: 2 ½ Hours**

### **Instructions To Candidates**

- This paper consists of two sections A and B.
- Answer all question in section A
- Answer question 15 is Compulsory and Other Three questions from this section B
- All answers should be answered in the spaces provided on the question paper.

### **For Examiner's Use Only**

<b>Section</b>	<b>Question</b>	<b>Score</b>
<b>A</b>	<b>1 - 14</b>	
<b>B</b>		
<b>Total Score</b>		

*This paper consists of 12 printed pages.*

*Candidates should check the question paper to ensure that all*

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**SECTION A (40MKS)**  
**ALL QUESTIONS IN THIS SECTION**

1. Give any two differences between fourth and fifth computer generations (2mks)

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2. List three ways in which computers are used in education. (3mks)

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3. a) Define the term booting (1mk)

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- b) Explain the difference between cold and warm booting. (2mks)

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4. State the use of

- a) Tab key (1mk)

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- b) home key (1mk)

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5. Distinguish between

- (a) Web master and web designer ((1mk)

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- (b) Parallel and serial cables (1mk)

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.....

6 a) Define a computer memory (1mk)

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b) Give three examples of special purpose memories (1 ½ mk)

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.....

c) Explain the difference between logical and physical files ( 2mks)

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7. Perform the following binary operations giving your answer in decimal

a) 11101.11

11111.11 + (2mks)

.....  
.....  
.....

b) 1111.11

1101.01 - (2mks)

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.....  
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8. a) What is search engine ? (1mk)

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.....

b) State three examples of search engine (1 ½ mks)

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.....

9. a), identify the program control structures represented by the flowchart segments above

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- i. .... (1 mk)
- ii. .... (1 mk)
- iii. .... (1 mk)

b. Differentiate between control structure (i) and (ii) (1 mk)

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 .....

10. You are provided with the worksheet below study it and answer the questions that follow

	A	B	C	D
1	Books	Pens	Pencils	
2	200	175	60	
3	375	260	460	
4	450	700	511	
5				

a) If cell D1 represents the total value of books pens and pencils. Determine the formulae for the total value of cell D1 used. (1 mk)

.....  
 .....

b) If the formula of cell D1 is copied to cell D3. Determine resulting value of cell D3 (1mk)

.....  
 .....

c) Give the type of cell referencing that is used in cell D3. (1mk)

11. State the application areas of

a) CAM (1mk)

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 .....

b) CAD (1mk)

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 .....

12. E-mail is becoming preferable means of communication these days, give two Advantages of adopting this technology in work place and at home (2mks)

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13. Give two ways of protecting data in a networked environment. (1mk)

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14. Highlight any four effects of the internet on society today. (4mks)

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**SECTION B (60MKS)**

**ANSWER QUESTION 15, IS COMPULSORY AND ANY OTHER THREE QUESTIONS FROM THIS SECTION.**

15 a) Define the terms

i) Flowchart (1mk)

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ii Algorithm (1mk)

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iii) Pseudo code (1mk)

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 .....

b) The gross salary of employees of Kenya Airways sales agency is based on basic salary and other additional benefits, which is computed as follows: basic salary and other additional benefits, which

i) Employees who have worked for the company for more than five years receive an additional pay of 10% to their basic salary

ii) Monthly salary bonus based on monthly sales of air tickets are rated as shown in the table.

Monthly air tickets sales	Bonus rate ( %)
Above 50,000	25
Between 25,000 and 50,000	15
Below 25,000	10

Draw a flowchart for a program that would be used to compute the gross salary then output each employee's basic salary and show all the benefits (9mks).

c) i) What is an array ? ( 1mk)

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.....

ii) State two properties of an array (2mks)

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16 a) i) What is information system ? (1mk)

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ii) Explain three purpose of information system. (3mks)

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ii) With use of a diagram explain the development of system life cycle (6mk)

b) i) Define system entropy (1mk)

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ii) State two main factors that may lead to system entropy. (2mks)

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.....

c) Explain why HTML is not a true programming language (2mks)

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17 a) i) Define electronic point of sale terminal? (1mk)

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.....

ii) Explain two advantages of using this system. (2mks)

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iii) Give an application areas of this system. (1mk)

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.....

b) List four elements of a network (2mks)

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.....

c) State three types communication media of the following

i) bounded (1 ½ mks)

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ii) unbounded communication (1 ½ mks)





ii) Environment (3mks)

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iii) Automated production (3mks)

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c) Distinguish between sequential and indexed sequential as used in file organization (2mks)

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19 a) State the application area of

i) Magnetic ink character recognition (1mk)

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.....

ii) Optical mark reader (1mk)

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.....

b) Define the terms

i) **Byte** (1 mk)

.....  
.....

ii) Nibble (1mk)

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.....

c) List any four objects used in the database (2mks)

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.....  
.....

d) Explain any two features of word processor (2mks)

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.....

e) Use two's complement method to perform the binary operation below

$37_{10} - 17_{10}$  (3mks)

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f) Write the BCD code for  $29_{10}$  (1mk)

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g) What is distributed data processing ? (1mk)

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.....

ii) Explain two advantages of distributed data processing in an organization (2mks)

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.....

iii) State one problem of adopting this system in an organization. (1mk)

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