

Name ..... Index No.....  
 School..... Candidate's Signature.....

**451/1**  
**COMPUTER STUDIES**  
**Paper1**  
**(THEORY)**  
**JULY/AUGUST 2007**  
**2 ½ hours**

**KAKAMEGA SOUTH DISTRICT MOCK EXAMINATION-2008**  
*Kenya Certificate of Secondary Education(K.C.S.E)*

**COMPUTER STUDIES**  
 Paper 1  
 THEORY  
 2 ½ hours

**INSTRUCTIONS TO CANDIDATES**

Write your name and index number in the spaces provided above  
 Sign and write the date of the examination in spaces provided  
 This paper consists of **TWO** sections; A and B  
 Answer **ALL** the questions in section A  
 Answer Question 16 and any other **THREE** questions from section B  
 All answers should be written in spaces provided on the question paper.  
 For Official Use Only

SECTION	QUESTION	SCORE
A	1-15	
B	16	
	17	
	18	
	19	
	20	
	Total score	

*This paper consists of 15 printed pages  
 Candidates should check the question paper to ascertain that all the  
 pages are printed as indicated and no questions are going missing.*

**SECTION A (40 MARKS)**

1. (a) What is disk formatting? (2 marks)

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(b) State the function of I/O devices (1 mark)

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2. Explain why the following control should be implemented for computer based systems (2 marks)

(i) Back-ups

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(ii) Password

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3. For each of the following, give one reason why they are not allowed in a computer laboratory (2 marks)

(i) Dust

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(ii) Foods and beverages.

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4. Distinguish between machine and assembly language (2 marks)

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5. Define the following terms (3 marks)

(a) Source program

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(b) Object code program

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(c) Assembly language

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6. Explain the following terms as used in program implementation (2 marks)

(i) Direct change over

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(ii) Phased change over

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7. List three differences between Wide Area Network (WAN) and Local Area Network (LAN) (3 marks)

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8. Define the term expert system (2 marks)

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9. Explain the following terms as used in Word Processing (3 marks)

(a) Word Warp

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(b) Orientation

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(c) Indenting

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10. Outline two ways in which computer can be used in Banks (2 marks)

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11. Give four career opportunities in I.C.T (2 marks)

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12.

(a) Convert the hexadecimal number  $111_{16}$  to its decimal equivalent (3 marks)  
(show your working)

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(b) Convert  $512_8$  to its base 10 equivalent (2 marks)

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13. State two health issues that may result from prolonged use of computers (2marks)

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14. Give two advantages and two disadvantages of using observation as a tool for fact finding

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.....(4 marks)

15.

(a) What does ADC refer to in relation to data processing? (1 mark)

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(b) State two advantages of using an A D C device (2 marks)

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**SECTION B (60 MARKS)**

16.

(a) In a programming process, the following technical terminologies are used. Explain each of them.

(i) Debugging (1 mark)

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(ii) Local variables (1 mark)

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(iii) Constant (1 mark)

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(iv) Bugs (1 mark)

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17.

(a) Mr. Kamaliza is a class teacher at Baraka High School and wishes to use Ms Excel program to process the following marks obtained by students during their End of year Examinations. Table below depicts the details.

	A	B	C	D	E	F	G
1	NAME	ENG	KISW	MATH	TOTAL	AV	MAX
2	MUNENE	50	30	40			
3	SALLY	80	70	42			
4	JOY	31	21	10			
5	BONNY	80	60	90			
6	MUMSHI	40	50	20			

Using the above data, determine

(i) The formula to calculate Total marks for Munene (2 marks)

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

(ii) The formula to calculate the average for Joy (2 marks)

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(iii) The formula to calculate the maximum score for Bonny (2 marks)

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(iv) Given that the average pass mark is 50, using a function, write a formula that indicates the remarks “ Pass” or “Fail” for Munishi (2 marks)

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(b) Dennis wants to create a payroll register, suggest the suitable application software he will use with a reason attached (2 marks)

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.....

(c) Using the text below, identify any five Word Processing formats that have been applied. State and define each feature briefly (5 marks)

**M**icrosoft Office Word 2007 helps you produce **professional – looking** documents by providing a comprehensive set of tools for creating and formatting your document in a new interface. Rich review, commenting, and comparison

capabilities help you quickly gather and manage feedback from colleagues. *Advanced data integration* ensures that documents stay connected to important sources of business information.

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18.

(a) Briefly explain the following data transmission methods with an example for each

(i) Simplex (2 marks)

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(ii) Half duplex (2 marks)

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(iii) Full duplex (2 marks)

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(b) Draw a flowchart that will calculate  $W = ab$  (ie  $2^4 = 16$ ), where  $a = 2$ ,  $b = 4$  and  $W = 16$  let your flowchart allow data entry by the keyboard, store data on hard disk drive and display results on output device (2 marks)

(c) Write a pseudo code for the data above (2 marks)

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.....

(d) A student database comprises of student details table and the fees received table and marks obtained table as shown below

Student detail tables	Fees Received table (2)	Marks obtained (3)
<ul style="list-style-type: none"> <li>- Surname</li> <li>- Middle Name</li> <li>- First Name</li> <li>- Admission Number- Course</li> </ul>	<ul style="list-style-type: none"> <li>- Date</li> <li>- Amount</li> <li>- Receipt</li> </ul>	<ul style="list-style-type: none"> <li>- Course</li> <li>- Grade</li> <li>- Report Form Number</li> </ul>

(i) State the primary key field for each table (3 marks)

Table 1.....

Table 2.....

Table 3.....

(ii) What are the two typical advantages of a primary key (1 mark)

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

(iii) State the field which will be a linking field for table 1 and 2 (1 mark)

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

19.

(a) State and explain how computer can be used in Health and Medical care in four different ways ( 4 marks)

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(b) Define the following terminologies ( 4 marks)

(i) Validity integrity

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(ii) Entity integrity

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(iii) Referential integrity

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(iv) Primary key

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(c) Discuss briefly any four disadvantages of networking computers ( 4 marks)

(i).....

(ii).....

(iii).....

(iv).....

(d) Nambuiria a form two student was not able to define the following term, as used in software licensing assist her ( 3 marks)

(i) Copyright.....

(ii) Trademark.....

(iii) Piracy.....

20.

(a) Solve the following

(i) Add  $647_8 + 777_8$  directly in Octal (2 marks)

(ii) Add  $647_8 + 777_8$  in Binary notation and convert back to Octal (4 marks)

(iii)  $11111_2 + 11111_2$  (2 marks)

(b) Name four file organization methods in a computer system (2 marks)

- (i).....
- (ii).....
- (iii).....
- (iv).....

(c) Define the following

(i) Hardware (½ mark)

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.....

(ii) Software

( ½ mark)

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(d) ROM is categorized as a primary storage of a computer system. Differentiate between the following types of ROM (2 marks)

(i) PROM

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(ii) E PROM

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(e) Give two dont's in the computer lab (2 marks)

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**END**