



MARANDA HIGH SCHOOL

Kenya Certificate of Secondary Education

MOCK EXAMINATIONS 2021

CODE451/1 SUBJECT: COMPUTER STUDIES Paper 1

December 2021 – **TIME** $2\frac{1}{2}$ Hours

Name: Adm No:

Class:Candidate's Signature:Date:/12/2021.

INSTRUCTION TO CANDIDATES

- Write your name and index number in the spaces provided above
- This paper consists of **Two** sections **A** and **B**
- Answer **ALL** questions in section **A**
- Answer question 16 and any other **THREE** questions from section **B**
- All answers should be written in the spaces provided on the question paper

FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	CANDIDATE'S SCORE
A	1 -15	
B	16	
	17	
	18	
	19	
	20	
	TOTAL SCORE	

SECTION A (40 MARKS)**Answer ALL the questions in SECTION**

1. State three functions of the control panel (3marks)

2. Use the passage below to answer the questions that follows

Oral literature is a broad term that includes: epics, folklore, proverbs, folksongs, oral poetry, jokes, myths, ritual chants, spells, legends, riddles, tongue-twisters, word games, recitations and word games. *Broadly it refers to any form of verbal art that is transmitted through word of mouth.*

Jane Nandwa and Austin Bukenya (1993) describe oral literature as:

“Those utterances whether spoken, recited or sung whose composition and performance exhibit to an appreciable degree the artistic character of accurate observation, vivid imagination and ingenious expression.”

When used in a piece of writing, oral literature in its various genres creates the effect of livening up the story and giving it an identity besides other functions such as capturing the audience’s attention and stressing important points. These effects of orature are portrayed vividly in Okot P’ Bitek’s novel “**White Teeth.**”

- (a) Mention three paragraph formatting features used in the passage above (3marks)

- (b) With an aid of examples describe three text formatting features applied in the above passage (3marks)

3. As regards to communication within computer network , what do you understand by the following terms (2marks)

- (i) Point –to-Point

- (ii) Broadcast

4. Describe three components of video conferencing (3marks)

5. With reference to Desktop publishing describe the following terms (2marks)

(i) Gutter

(ii) Stroke

6. Linda does not understand why computers are said to be **Automatic** at the same time they have No Intelligent Quotient (IQ) (2marks)

7. State the difference between private university and public university (2marks)

8. Ronaldo a student from Lenana School lives in a house with full internet access. She spends most of her time on phone and Desktop computer. State any three social issues associated with doing this (3mks)

9. Mention three factors to consider when choosing a file organization method (3marks)

10. Give two reasons to justify why many computer users today prefer saving their documents in the google drive (2marks)

11. Computerization and automation are the great innovations of the 21st century. Describe how introduction of computers in the work place affected the job market (3marks)

12. Describe three challenges affecting eLearning in most schools in Kenya (3marks)

13. Use illustrations to explain two ways of implementing FOR loop (2mks)

14. Explain the function of the following as used in data security and control (2marks)

(i) Patches

(ii) Firewall

15. The office has a fast internet connection for transferring information. However sometimes the internet run slowly. Give two reasons why this could be the case (2mks)

SECTION B (60 MARKS)**Answer Question I6 (Compulsory) and Any other THREE in this Section**

16.

(a) Describe the following qualities of an algorithm **(3marks)**

(i) Definiteness

(ii) Finiteness

(iii) Syntax

(b) State three differences between Assembly language and Machine language **(3mark)**

(c) Study the Pseudo code below and use it to answer the question that follows

```
Start
COUNT =0
S=14
T=20
REPEAT
READ R
IF R>S THEN
    S=R+T
    T=R-S
ELSE
    S=T-R
    T=R+S
ENDIF
PRINT R, S, T
COUNT =COUNT +1
UNTIL COUNT =3
Stop
```

- (i) Draw a flowchart for the above algorithm (9marks)

17.

(a) Study the table below and answer the questions that follow

	A	B	C	D	E	F	G
I	Student Name	Math	English	Computer	Total	Average	Grade
2	James Pesa	24	22	52			
3	Maureen Kamau	60	17	71			
4	James Jared	24	41	10			
5	Mary Anna	52	63	81			
6							

(i) Write down the formula that

(a) Calculate the total marks for Maureen Kamau (2marks)

(b) Calculate the total marks for students with more than 50 and above in Maths (2marks)

(c) Get the mean score for Computer (2mark)

(ii) The grading system is shown in the table below. Write a function that will assign grades as reflected in the table below (3marks)

Average	Grade
80 - 90	A
70 - 80	B
60 - 70	C
50 - 60	D
0 - 49	E

(iii) Write a formula using named reference that counts the total number of students who have scored more than 50 in computer (2marks)

(b) Describe three features that make spreadsheet application suitable for mathematical applications (3marks)

(c) A formula = B\$2+\$C2 was typed in cell C2 then copied to cell C3 and then finally to D3. State how the formula will appear in D3 (1mark)

18.

- (a) What is the binary equivalent of $24\frac{12}{32}$ base 10 (3marks)

- (b) Convert 5BA2H to Binary (3marks)

- (c) Using 8-bits twos complement subtract 19_{10} from 14_{10} (3marks)

- (d) Given that the left most digit is a sign bit work out the decimal equivalent of the following binary numbers 00111010110_2 (2marks)

- (e) 101101_2 is a negative use two complement to get its Decimal equivalent (2marks)

- (f) Describe two coding schemes used by computers to represent data in a computer (2marks)

19.

- (i) Study the tables shown below and use them to answer the questions that follow

Table 1

Admission No	Name	Guardian ID	Date of Birth	Class	Hall	County
0978	Peter Kilulu	P0023	12-12-1999	Form Three	Moi	Kiambu
4678	John James	P0045	07-08-1999	Form Two	Kenyatta	Muranga
6754	Luke Kenya	P0023	06-01-2000	Form One	Uhuru	Migori

Table 2

Guardian ID	Name	Address	Telephone	County
P0023	John Mayi	P.O Box 123 Kisumu	0723567453	Kisumu
P0045	Jerry Watu	P.O. Box 2341 Nairobi	0745897654	Nairobi

- (a) Choose the most appropriate key field for Table 1 and 2 (2marks)

- (b) Identify the most suitable data types Admission No and Date of Birth (2marks)

- (c) Describe how a relationship can be established between Table 1 and 2 (3marks)

- (d) Write an expression to validate Date of Birth to allow dates that follow in the year 1999 only (2marks)

- (ii) Peter Kipasi is the system analyst for Finaly group of companies. The Company Management automated their operations to have a competitive advantage over other companies in the same field. Peter received a memo from the CEO requesting him to consider changing the current information system. State what might have necessitated this (3mark)

- (iii) State three qualities of a good system analyst (3marks)

20.

- (i) Mention four limitations of computer networking (4marks)

- (ii) Explain how fibre optic transmit data signal and yet the core can only allow light signals to pass through (3marks)

- (iii) State the function of the following Communication devices


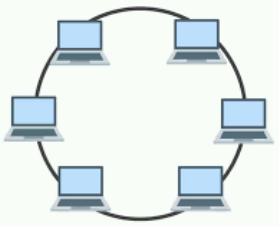
- (a) Router (1mark)

- (b) Switch (1mark)

- (c) Bridge (1mark)

- (d) NIC (1mark)

- (iv) Identify the Network topologies represented in the table (4marks)

Name:	Name:
	
Name:	Name:
