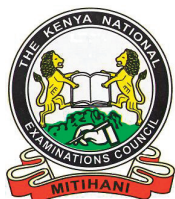**451/3 Inst. Sc.**
COMPUTER STUDIES
Paper 3
(Project)
March to September 2017
7 months

THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education
Computer Studies
Paper 3
(Project)
7 months

Instructions to Schools

Each school presenting candidates for Computer Studies (451) in the KCSE examination should produce two copies of these instructions. One copy will be for the Headteacher and the other one for the teacher in charge of the Computer Studies examination project hereafter referred to as the Computer Studies Teacher.

The headteacher and the Computer Studies teacher should each read these instructions carefully. Relevant information should then be conveyed to the candidates as soon as possible to enable them to carry out the project in good time.

There is only one project. The title of the project is ***"MWANZO BARAKA MANAGEMENT INFORMATION SYSTEM"***. *It is necessary for the Computer Studies Teacher to discuss the project with the candidates and the Headteacher so as to understand what is required.*

This paper consists of 2 printed pages.

PROJECT TITLE: MWANZO BARAKA MANAGEMENT INFORMATION SYSTEM

1. A school presenting candidates for computer studies shall be required to provide each candidate with the following:

    (a) A working computer system:

        Each candidate will require access to a computer. The computer should be capable of running a Database Management System and a word processor.

    (b) A working printer:

        The candidate will require a printer to produce drafts and the final printouts of the project work.

    (c) Removable storage medium

        The candidate is required to store the finished project work in the removable storage medium. This will be handed in together with the printouts to the Headteacher.

2. After the candidates have been provided with the facilities outlined in (1) above, they should be instructed to keep a record of the activities carried out and any other observations made. The records will be used by the candidates to write their final report.

3. The project should be carried out by candidates between the months of **March** and **September**.

4. The marking scheme will be sent to schools at the beginning of September. The computer studies teacher should accurately assess the candidates' projects using the marking scheme provided.

5. The total score for each candidate shall be transferred from the assessment card to the manual marksheet. The list in the manual marksheet should be in an **ascending order of index numbers**.

6. It is the responsibility of the headteacher to ensure that candidates' projects are marked and the marks are correctly entered in the manual marksheets. The report printouts, the softcopies, the manual marksheets and the report by the headteacher should be sent to the Kenya National Examinations Council through the Sub-County Examinations Officer before the end of the first week of the month of October.

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451/3
COMPUTER STUDIES
Paper 3
(PROJECT)
March to September 2017
7 months

THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education
COMPUTER STUDIES
Paper 3
(PROJECT)
7 months

Instructions to candidates

(a)   *Candidates are expected to use a Database Management System when developing their projects.*
(b)   *A softcopy of the work done must be stored in a removable storage medium (CD-R).*
(c)   *Candidate's name and index number should appear on the cover page of the documentation and on the storage medium.*
(d)   *Each candidate should hand in a hardcopy and a softcopy of the project documentation.*
(e)   ***Candidates should answer the questions in English.***

This paper consists of 3 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

MWANZO BARAKA MANAGEMENT INFORMATION SYSTEM

Mwanzo Baraka organisation is a self help group intended to improve the economic status of its members through pooling of financial resources. The organisation sustains itself through registration fees of its members, monthly contributions, interest accrued through loans given to members, and penalties for delayed payments. The members benefit by getting cheap loans from the organisation.

Membership to the organisation is by registration. There are two types of membership; individual and group. Group membership constitutes two or more individuals who have common interests. An individual member pays a registration fee of Kshs. 2,000 while a group pays Kshs. 5,000. During the registration of individuals, personal details are captured. When registering a group, details of the group and those of its individual members are captured.

An individual member contributes a monthly share of not less than Kshs. 1,000 to the organisation. For those registered under a group, each member contributes a monthly share of not less than Kshs. 1,000 where Kshs. 200 is the group share contribution by the member. All monthly contributions are treated as shares for the contributor and attract annual dividends.

Members can borrow loans from the organisation based on their total shares. Members registered as individuals can be loaned up to three times their share contribution. The repayment period does not exceed three years and the loan attracts interest at a rate of 1.2% per month on the principal amount borrowed. Members registered under a group can be loaned up to four times their individual share contribution. The repayment period does not exceed four years and the loan attracts an interest at a rate of 1% per month on the principal amount borrowed. A group can also get a group loan, amounting to three times the group's total share contribution which attracts interest at a rate of 0.8% per month payable within five years. All payments to the organisation are monthly and must be made by the last day of the month. Any defaulted payments are penalised at a rate of 10% per month.

Every end of the year, the organisation determines the total interest charged on all loans and total penalties on defaulted amounts. 60% of this amount is paid as dividends to the shareholders each getting an amount proportional to their total share contributions. The balance is retained to run the organisation.

917116

Design a computerised database system with its documentation for the Mwanzo Baraka organisation that should be able to:

1. Maintain records of members and groups.

2. Maintain records of registration fees.

3. Maintain records of monthly contributions.

4. Maintain records of loan borrowed.

5. Compute loan repayments and interest.

6. Compute income for the organisation.

7. Compute dividends to each shareholder.

8. Generate reports on demand.

(100 marks)

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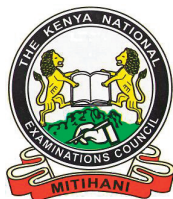
THE KENYA NATIONAL EXAMINATIONS COUNCIL

KENYA CERTIFICATE OF SECONDARY EDUCATION

COMPUTER STUDIES
(PROJECT)

MARKING SCHEME
(CONFIDENTIAL)

THIS MARKING SCHEME IS THE PROPERTY OF THE KENYA NATIONAL EXAMINATIONS COUNCIL AND MUST BE RETURNED TO THE KENYA NATIONAL EXAMINATIONS COUNCIL AT THE END OF MARKING.

This marking scheme consists of 5 printed pages.

Turn over

ITEM NO.	ITEM		MAXIMUM MARKS	MARKS AWARDED
1.	**TITLE PAGE**			
	(a)	Name and index number of candidate	$\frac{1}{2}$	
	(b)	Title of the project	$\frac{1}{2}$	
	(c)	Year of examination	$\frac{1}{2}$	
	(d)	Name of school	$\frac{1}{2}$	
	TOTAL		**2**	
2.	**PRELIMINARY PAGES**			
	(a)	Declaration	$\frac{1}{2}$	
	(b)	Dedication	$\frac{1}{2}$	
	(c)	Acknowledgement		
		(i) Existence	$\frac{1}{2}$	
		(ii) Relevance	$\frac{1}{2}$	
	(d)	**TABLE OF CONTENTS**		
		(i) List of contents	1	
		(ii) Correct referencing	1	
		(iii) Completeness (All major headings included)	1	
	(e)	**LIST OF FIGURES/TABLES**		
		(i) List of figures/tables	1	
		(ii) Correct referencing	1	
	TOTAL		**7**	
3.	**INTRODUCTION**			
	(a)	Existence	1	
	(b)	Relevance	1	
	TOTAL		**2**	

ITEM NO.	ITEM		MAXIMUM MARKS	MARKS AWARDED
4.	**ANALYSIS**			
	(a)	Problem definition	1	
	(b)	Existing system		
		(i) Overview	1	
		(ii) System structure	1	
	(c)	Proposed system		
		(i) Objectives	1	
		(ii) Scope of the system	1	
		(iii) Benefits	2	
		(iv) Feasibility (at least 3 @ 1 mark each)	3	
	TOTAL		**10**	
5.	**SYSTEM DESIGN**			
	(a)	System flow chart		
		(i) Correct symbols	1	
		(ii) Logic	1	
		(iii) Accompanying text	1	
	(b)	Appropriate fields and data types (Any 20 fields @ $\frac{1}{2}$ mark for every 2)	5	
	(c)	Grouping variables into appropriate entities (at least 5 entities)	5	
	(d)	Input design (at least 3) @ 1 mark each	3	
	(e)	Output design (at least 4) @ 1 mark each	4	
	TOTAL		**20**	

ITEM NO.	ITEM		MAXIMUM MARKS	MARKS AWARDED
6.	**SYSTEM CONSTRUCTION**			
	(a)	Tables (at least 5 @ 1 mark each)	5	
	(b)	Relationships (at least 4 correct links @ 1 mark each)	4	
	(c)	Input screens (at least 4 screen @ $\frac{1}{2}$ mark each)	2	
	(d)	Data manipulation (use of any of: queries, procedures, functions, modules or combinations) to obtain the following:		
		(i) Members statement	3	
		(ii) Group statement	4	
		(iii) Annual income for organisation	5	
		(iv) Contributions	2	
		(v) Dividends	3	
	(e)	Output screens (at least 3 @ 1 mark each)	3	
	TOTAL		**31**	
7.	**DEMONSTRATION BY THE CANDIDATE**			
	(a)	Loading/running the system	1	
	(b)	Data capture	2	
	(c)	Navigation (use of appropriate navigation buttons)	2	
	(d)	Data maintenance (edit, append, delete)	2	
	(e)	Input validation (any 4 @ $\frac{1}{2}$ mark)	2	
	(f)	Results (any 5 reports with summary @ 1 mark each)	5	
	TOTAL		**14**	
8.	**USER MANUAL**			
	(a)	Installation guide/requirements	1	
	(b)	Loading process	1	
	(c)	Navigation guide	1	
	(d)	Procedure of generating output	1	
	TOTAL		**4**	

ITEM NO.	ITEM		MAXIMUM MARKS	MARKS AWARDED
9.	**MISCELLANEOUS**			
	(a)	Conclusion	1	
	(b)	Recommendation	1	
	(c)	Bibliography	1	
	(d)	Appendices	1	
	TOTAL		**4**	
10.	**DOCUMENTATION**			
	(a)	Binding	1	
	(b)	Fully typed text	2	
	(c)	All diagrams drawn using a software application tool	2	
	(d)	Logical sequencing of content	1	
	TOTAL		**6**	
	GRAND TOTAL		**100**	

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THE KENYA NATIONAL EXAMINATIONS COUNCIL

KCSE MANUAL MARKSHEET

COMPUTER STUDIES PROJECT

Year of Examination ....

Subject Name: Computer Studies   Subject Code: **451**   Paper No. **3**

Centre Name...   Centre No...

Index Number	Candidate's Name	Teacher's Mark	Final Mark (For official use only)	Remarks

Subject Teacher's Name... Signature........................... Date..................

Name of Headteacher.. Signature......................... Date..................

School Rubber Stamp

917122
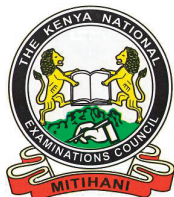
THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education
451/3 Computer Studies Project

DECLARATION BY THE CANDIDATE

I certify that this is a true report of my Computer Studies Project that I carried out without any assistance, other than the guidance by my teacher as the supervisor of the project.

Name of the Candidate ....

Index Number ....

Signature .... Date ....

For official use only

Enter the score awarded in the box below.

Score

917118

MANYAM FRANCHISE
Discover!Learn!Apply

Centre Number ....

THE KENYA NATIONAL EXAMINATIONS COUNCIL
PROJECT REPORT FORM FOR THE CENTRE
(To be completed by the Computer Studies teacher)

1.   Project Title. **MWANZO BARAKA MANAGEMENT INFORMATION SYSTEM.**

2.   Date that the instructions were given to candidates to start the project.

....

3.   Difficulties, if any, that were experienced by all the candidates.

....

....

....

4.   Any unique occurrence/information that is relevant to the project.

....

....

....

5.   Name of the Computer Studies teacher.

....

Signature   ....

Date   ....

I certify that the information given in this form is true to the best of my knowledge.
I also certify that these are true reports of the Computer Studies project for the candidates.
The projects were carried out by the candidates without any assistance other than what is
provided for in the instructions.

Name of the Headteacher   ....

Signature   ....

Date   ....

Official Stamp