

THE NATIONAL EXAMINATIONS COUNCIL OF TANZANIA



**CERTIFICATE OF SECONDARY EDUCATION
EXAMINATION FORMATS**

ISSUED BY:

**THE NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
P.O. BOX 2624
DAR ES SALAAM
TANZANIA.**

REVISED FEBRUARY, 2019

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FOREWORD

This examination format booklet is a revised version of the one that was issued in 2008 by the National Examinations Council of Tanzania (NECTA). The revised booklet has been prepared to cover all subjects for the Certificate of Secondary Education Examination as prescribed by *Circular Number 1 of the Ministry of Education and Vocational Training (MoEVT)* of April 2006 (appendix 3) and will be used with effect from 2019. It includes all the core and optional subjects assessed by NECTA.

The booklet has been revised to accommodate important changes in learning, which have occurred since 2008. These changes include the revision of syllabuses for subjects such as 032 Chemistry (2010), 036 Information and Computer Studies (2010), 031 Physics (2010), 015 Elimu ya Dini ya Kiislamu (2012), 014 Bible Knowledge (2012), 019 Theatre Arts (2014), 061 Commerce (2016), 062 Book-keeping and the introduction of 026 Chinese Language (2015) in the Ordinary Level *Certificate of Secondary Education Examinations* (CSEE). The changes are also linked to the new educational policy of 2014, which among other things, direct the country to achieve middle level economy and industrial development by 2025. Therefore, the National Examinations Council of Tanzania has to redefine its procedures primarily for competence-based assessment.

Moreover, the examination format booklet covers the reviewed modes of administering practical examinations in which *One Month Advance Instructions* have been replaced by a *checklist* of the required materials for conducting such examinations.

The Examination Formats are presented in five numbered paragraphs for the introduction, general objectives, general competencies, examination rubric and examination content. The table of specifications is inserted at the end of each format and indicates the total weight for each topic and total percentage weighting for the paper.

Generally, this format booklet is expected to provide guidance for examination setters, moderators and teachers to set fair, valid and reliable assessment for student candidates. Also the format provides guidance to students on the structure of the examination paper. However, classroom teachers are strongly advised not to replace the syllabus with examination formats.

I am very appreciative to everyone who participated in the revision of these formats.



Dr. Charles E. Msonde
EXECUTIVE SECRETARY

010 QUALIFYING TEST

(For Private Candidates Only)

1.0 INTRODUCTION

The Qualifying Test (QT) will be administered to Private Candidates intending to sit for the Certificate of Secondary Education Examination (CSEE), but who lack the Form II level secondary education qualification.

The Qualifying Test will comprise questions from Civics, English Language, Kiswahili, History, Geography, Biology, Chemistry, Mathematics and Physics. The QT assesses as much as possible topics from the form I and II national syllabus but with a focus on testing for knowledge and skills equivalent to the National Form II Examination.

2.0 GENERAL OBJECTIVE

The main objective of the Qualifying Test is to determine whether the prospective candidates have attained the secondary education equivalent to Form II level and, thus, are in a position to sit for the Certificate of Secondary Education Examination (CSEE).

3.0 GENERAL COMPETENCES

The examination will specifically test the candidates' ability to:

- 3.1 interpret basic knowledge, facts, principles, concepts and figures in the stated subjects;
- 3.2 state, define and name basic knowledge, facts, principles and concepts in relevant subjects;
- 3.3 write correct language using proper grammar, structure and vocabulary in the subject tested;
- 3.4 write a clear summary, answer comprehension questions and write a composition on a given passage, topic or subject;
- 3.5 demonstrate and interpret mathematical knowledge within a given context; manipulate the set theory and application, and carry out simple differentiation and integration;
- 3.6 demonstrate use of knowledge and skills in Physics, Chemistry and Biology to solve problems which may involve unfamiliar situations; and
- 3.7 use knowledge, concepts, laws, theories and principles of the Physics, Chemistry and Biology subjects in daily life.

4.0 EXAMINATION RUBRIC

There will be **one (1)** paper of three hours. The paper will consist of 24 questions spread out in sections A and B. Candidates will be required to answer **all the** questions in part I and II of Section A and **confine** themselves to only **one** part of the three parts in section B. candidates will be required to answer a total of **16** question which will weigh **100** marks.

4.1 **Section A** will comprise **two** parts. Part I will be on Civics and will consist of **four (4)** questions with a total of **twelve (12)** items. Part II will be on languages and will consist of **eight (8)** questions of which **four (4)** questions will assess the English Language and **four (4)** questions will assess Kiswahili Language. This part will comprise **twenty four (24)** items. Candidates will be required to answer all the **twelve (12)** questions and each question will weigh **five (5)** marks in this section. Thus this section will weigh **60** marks.

4.2 **Section B** will consist of **three** parts. Each part will comprise four (4) questions with a total of **thirty (30)** items. Candidates will be required to **confine** themselves to **one** part. Part I will comprise **four (4)** questions of which **two (2)** questions will assess Geography and **two (2)** questions History, Part II will comprise **four (4)** questions of which **two (2)** questions will assess Physics and **two (2)** Mathematics and Part III will comprise **four (4)** questions of which **two (2)** questions will be on Biology and **two (2)** Chemistry. Each question in this section will carry **10** marks. Thus, this section will weigh **40** marks.

5.0 EXAMINATION CONTENT

The candidates will be assessed on the following topics in each respective subject:

5.1 Civics

- 5.1.1 Promotion of life skills and family life
- 5.1.2 Human rights and responsible citizenship
- 5.1.3 Government of Tanzania and democracy
- 5.1.4 Proper behaviour and responsible decision-making
- 5.1.5 Our nation
- 5.1.6 Work
- 5.1.7 Road safety education
- 5.1.8 Gender

5.2 Kiswahili

- 5.2.1 Ufahamu na ufupisho
- 5.2.2 Sarufi na utunzi wa lugha
- 5.2.3 Fasihi
- 5.2.4 Utungaji

5.3 English Language

- 5.3.1 Comprehension and summary
- 5.3.2 Structure
- 5.3.3 Tenses
- 5.3.4 Composition
- 5.3.5 Response to readings.

5.4 Geography

- 5.4.1 Concepts of Geography
- 5.4.2 Major features of the Earth's surface
- 5.4.3 The solar system
- 5.4.4 Weather and climate
- 5.4.5 Map work
- 5.4.6 Human activities
- 5.4.7 Agriculture
- 5.4.8 Water management for economic development
- 5.4.9 Sustainable use of forest resources
- 5.4.10 Sustainable mining
- 5.4.11 Tourism industry
- 5.4.12 Manufacturing industry
- 5.4.13 Sustainable use of power and energy resources
- 5.4.14 Transport

5.5 History

- 5.5.1 Sources and importance of history
- 5.5.2 Evolution of man, technology and environment
- 5.5.3 Development of economic activities and their impact
- 5.5.4 Development of social and political systems
- 5.5.5 Interactions among the people of Africa
- 5.5.6 Socio-economic development and production in pre-colonial Africa
- 5.5.7 Africa and the external world
- 5.5.8 Industrial capitalism

5.6 Chemistry

- 5.6.1 Introduction to Chemistry
- 5.6.2 Laboratory techniques and safety
- 5.6.3 Heat sources and flames
- 5.6.4 Scientific procedures
- 5.6.5 Matter
- 5.6.6 Air, combustion, rusting and fire fighting
- 5.6.7 Oxygen
- 5.6.8 Hydrogen
- 5.6.9 Water
- 5.6.10 Fuels and energy
- 5.6.11 Atomic structure
- 5.6.12 Periodic classification
- 5.6.13 Formula bonding and nomenclature

5.7 Biology

- 5.7.1 Introduction to biology
- 5.7.2 Safety in our environment
- 5.7.3 Health and immunity
- 5.7.4 Cell structure and organisation
- 5.7.5 Classification of living things
- 5.7.6 Nutrition
- 5.7.7 Balance of nature
- 5.7.8 Transport of materials in living things
- 5.7.9 Gaseous exchange and respiration

5.8 Physics

- 5.8.1 Introduction to Physics
- 5.8.2 Introduction to laboratory practice
- 5.8.3 Measurement
- 5.8.4 Force
- 5.8.5 Archimedes' Principle and the Law of Floatation
- 5.8.6 Structure and properties of matter
- 5.8.7 Pressure
- 5.8.8 Work, Energy and Power
- 5.8.9 Light
- 5.8.10 Static electricity
- 5.8.11 Current electricity
- 5.8.12 Magnetism
- 5.8.13 Forces in equilibrium
- 5.8.14 Simple machines
- 5.8.15 Motion in a straight line

- 5.8.16 Newton's Laws of Motion
- 5.8.17 Temperature
- 5.8.18 Sustainable sources of energy

5.9 Basic Mathematics

- 5.9.1 Numbers, fractions, decimals and percentages
- 5.9.2 Units, approximation and geometry
- 5.9.3 Ratio, profit and loss
- 5.9.4 Co-ordinates geometry, perimeters and areas
- 5.9.5 Algebra
- 5.9.6 Quadratic equations
- 5.9.7 Radicals, exponents and logarithms
- 5.9.8 Congruence and similarity
- 5.9.9 Geometrical transformations
- 5.9.10 Pythagoras theorem and trigonometry
- 5.9.11 Sets
- 5.9.12 Statistics

6.0 TABLE OF SPECIFICATION

Three alternative Tables of Specification (1, 2, and 3) are provided to cater for the candidates who will take the examination for subjects in Section A and choose options in section B that is either part I, II or III.

**Alternative 1: Table of Specification for Civics, Kiswahili, English Language,
History and Geography**

SN	Topics		Skills to be tested						Number of items	Percentage weight per topic
			Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Civics	Promotion of life skills and Family life							2	3.8
		Human rights and Responsible Citizenship							2	3.5
		Government of Tanzania and Democracy							4	6.4
		Proper behaviour and responsible decision-making							1	1.6
		Our Nation							1	1.0
		Road safety education							1	1.6
		Gender							1	1.8
2	Kiswahili	Sarufi na utumizi wa lugha							2.7	4.5
		Fasihi							4.4	7.3
		Uandishi							2.5	4.2
		Ufahamu							2.4	4
3	English Language	Comprehension and Summary							2.2	3.8
		Structure							3	5
		Tenses							2	3.4
		Composition							4.6	7.7
4	History	Sources and Importance of History							1.1	1.5
		Evolution of Man, Technology and Environment							1.4	1.9
		Interactions among the							2.6	3.5

		People of Africa, Development of Social, Economic and Political Systems and Their Impact								
		African and the External World							2	2.6
		Industrial Capitalism							1.2	1.6
5	Geography	Concept of Geography and Solar system							4.4	5.9
		Major features of the Earth							2.3	3.2
		Weather and climate							2.3	3.2
		Map work							1.8	2.4
		Human activities and Agriculture							1.1	1.4
		Water management for economic development							2.1	2.8
		Sustainable use of forest resources							0.7	0.9
		Sustainable mining							1.5	2.0
		Tourism industry							1.2	1.6
		Manufacturing industry							1.7	2.4
		Sustainable use of power and energy resources							1.7	2.4
		Transport							0.8	1.1
Total Number of Items									66	
Total Percentage Weight										100

**Alternative 2: Table of Specification for Civics, Kiswahili, English Language,
Physics and Mathematics**

SN	Topics		Skills to be tested						Number of Items	Percentage Weight per Topic
			Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Civics	Promotion of life skills and family life							2	3.8
		Human rights and responsible citizenship							2	3.5
		Government of Tanzania and Democracy							4	6.4
		Proper behaviour and responsible decision-making							1	1.6
		Our Nation							1	1.0
		Road safety education							1	1.6
		Gender							1	1.8
2	Kiswahili	Sarufi na utumizi wa lugha							2.7	4.5
		Fasihi							4.4	7.3
		Uandishi							2.5	4.2
		Ufahamu							2.4	4
3	English Language	Comprehension and summary							2.2	3.8
		Structure							3	5
		Tenses							2	3.4
		Composition							4.6	7.7
4	Physics	Measurement							1.1	1.5
		Archimedes' Principle and Law of Floatation							1.1	1.5
		Structure and properties of matter							1.2	1.6
		Force and pressure							1.5	2.0

		Work, energy and power							1.1	1.5
		Light							1.0	1.4
		Static electricity							1.2	1.6
		Current electricity							0.7	1.0
		Magnetism							1.2	1.6
		Forces in equilibrium							0.8	1.0
		Simple machines							1.6	2.1
		Motion in a straight line							0.8	1.0
		Newton’s Laws of Motion							0.9	1.2
		Sustainable energy sources							0.8	1.1
5	Mathematics	Numbers and approximations							2	2.8
		Fractions							1	1.5
		Decimals and percentages							1	1.2
		Units							1	0.8
		Geometry, perimeters and areas							1	1.6
		Algebra and quadratic equations							1	1.9
		Coordinate geometry							1	0.9
		Exponents and radicals							1	1.3
		Logarithms							1	1.3
		Congruence and similarity							1	1.0
		Geometrical transformations							1	1.4
		Pythagoras theorem and trigonometry							1	1.2
		Sets							1	1.9
		Statistics							1	1.5
Total Number of Items									66	
Total Percentage Weight										100

**Alternative 3: Table of Specification for Civics, Kiswahili, English Language,
Biology and Chemistry**

SN	Topics		Skills to be tested						Number of items	Percentage Weight per Topic
			Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Civics	Promotion of life skills and Family life							2	3.8
		Human rights and responsible citizenship							2	3.5
		Government of Tanzania and Democracy							4	6.4
		Proper behaviour and Responsible decision-making							1	1.6
		Our Nation							1	1.0
		Road safety education							1	1.7
		Gender							1	1.8
2	Kiswahili	Sarufi na utumizi wa lugha							2.7	4.5
		Fasihi							4.4	7.3
		Uandishi							2.5	4.2
		Ufahamu							2.4	4
3	English Language	Comprehension and summary							2.3	3.8
		Structure							3	5
		Tenses							2.1	3.4
		Composition							4.6	7.7
4	Biology	Introduction to Biology							2.4	3.2
		Safety in our environment							2.2	3.0
		Health immunity							2.8	4.0
		Cell structure and organisation							0.5	0.7
		Classification of living things							1.9	2.5

		Nutrition							1.8	2.4
		Balance of nature							0.5	0.7
		Transport of materials in living things							1.8	2.4
		Gaseous exchange and respiration							1	1.3
5	Chemistry	Introduction to chemistry							0.3	0.5
		Laboratory techniques and safety							1.7	2.3
		Heat sources and flames							0.7	0.9
		Scientific procedures							0.3	0.4
		Matter							0.5	0.7
		Air, combustion, rusting and fire fighting							1.7	2.3
		Oxygen							0.5	0.7
		Hydrogen							0.5	0.7
		Water							0.7	0.9
		Fuels and energy							1.7	2.3
		Atomic structure							2.1	2.8
		Periodic classification							1	1.3
		Formula bonding and nomenclature							3.2	4.2
Total Number of Items									66	
Total Percentage Weight										100

011 CIVICS

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format issued by the National Examination Council of Tanzania (NECTA). The format is based on the Civics syllabus of 2005. The emphasis in the reviewed format is on competence-based assessment featuring higher order thinking skills. However, there are no changes in the examination content.

2.0 GENERAL OBJECTIVES

The Civics examination will assess the extent to which the candidates can:

- 2.1 analyse the nation's culture and its resources;
- 2.2 demonstrate various life skills;
- 2.3 express civic responsibility and active civic participation skills;
- 2.4 express proper behaviour and responsible decision-making and accept the challenges of working hard;
- 2.5 explain various democratic values and participation in its development;
- 2.6 describe the concept of 'government', its importance and purposes so as to prepare them for participation in its running;
- 2.7 analyse information on current events which shape the social, cultural, political, economic and technological development of the Tanzania society;
- 2.8 describe cross-cutting issues, their impact in Tanzania and intervention steps to be taken;
- 2.9 show skills related to road safety; and
- 2.10 demonstrate skills on matters relating to family issues.

3.0 GENERAL COMPETENCES

The examination will assess the candidates' ability to:

- 3.1 analyse the nation's culture and its resources;
- 3.2 apply life skills in their daily life;
- 3.3 express civic responsibility and active civic participation;
- 3.4 work hard willingly for himself/herself for national development;
- 3.5 account for democratic values;
- 3.6 analyse the government structure and how it operates;
- 3.7 reflect critically on globalisation issues and their impact on society;
- 3.8 analyse cross-cutting issues in our society;

- 3.9 observe road safety regulations; and
- 3.10 analyse matters relating to family issues and make the right decisions.

4.0 EXAMINATION RUBRIC

There will be **one (1)** paper of **three (3)** hours. The paper will consist of **14** questions in sections A, B and C. Candidates will be required to answer a total of **13** questions which will weigh **100** marks.

Section A will comprise **two (2)** questions. Question **1** will consist of 10 multiple-choice items. Each item will weigh **one (1)** mark. Question **2** will consist of 5 matching items. Each item will weigh **one (1)** mark. Candidates will be required to answer all the questions. Hence, section A will weigh **15** marks.

Section B will have **eight (8)** short answer questions (questions 3-10). The questions will be set from any topic in the syllabus and each question will weigh **five (5)** marks. Candidates will be required to answer all the questions. Thus, section B will weigh **40** marks.

Section C will comprise **four (4)** essay questions (questions 11 - 14). The questions will be set from various topics of the syllabus. Each question will weigh **15** marks. Candidates will be required to answer any **three (3)** questions from this section. Section C will account for a total of **45** marks.

5.0 EXAMINATION CONTENT

The candidates will be assessed on the following topics:

- 5.1 Our nation
- 5.2 Promotion of life skills
- 5.3 Human rights
- 5.4 Responsible citizenship
- 5.5 Work
- 5.6 Family life
- 5.7 Proper behaviour and responsible decision-making
- 5.8 Road safety education
- 5.9 Government of Tanzania
- 5.10 Democracy
- 5.11 Gender
- 5.12 Economic and Social Development
- 5.13 Poverty

5.14 Culture

5.15 Globalisation

011 Civics Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Our nation							0.6	2.7
2	Promotion of life skills							1.7	7.6
3	Human rights							0.7	3.3
4	Responsible citizenship							1.4	6.1
5	Work							0.5	2.2
6	Family life							0.6	2.7
7	Proper behaviour and responsible decision-making							0.9	4.3
8	Road safety education							0.9	4.3
9	Government of Tanzania							2.4	10.6
10	Democracy							1.6	6.8
11	Gender							1.2	5.1
12	Economic and social development							2.1	8.8
13	Poverty							0.9	4.1
14	Culture							6.1	26.4
15	Globalisation							1.1	4.9
Total Number of Items								23	
Total Percentage Weight									100

012 HISTORY
(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format issued by the National Examinations Council of Tanzania (NECTA). This format is based on the History syllabus for Ordinary Level Secondary Education of 2010 which is still in use. The revised format emphasises on measuring the students' competencies in higher order thinking skills. Despite such emphasis, there are no changes in the examination content.

2.0 GENERAL OBJECTIVES

The examination will assess the extent to which the candidates can:

- 2.1 demonstrate knowledge of historical events and factors that shaped the past and the present conditions of Africa in relation to the rest of the world;
- 2.2 apply the knowledge of History in interpreting, analysing and evaluating events taking place in the world and Africa in particular; and
- 2.3 demonstrate basic skills of critical thinking, reasoning, judgment, empathy and effective participation in developmental activities.

3.0 GENERAL COMPETENCES

The History examination will test the candidates' ability to:

- 3.1 assess the efforts made by pre-colonial African societies in mastering their environment and social, political and economic advancement;
- 3.2 evaluate the impact of foreign domination on African societies from the period of interaction with the external world to colonization of Africa;
- 3.3 explain various efforts and strategies made by African states in the struggle against colonial subjugation;
- 3.4 assess critically the cultural, political, economic and technological changes made by the African countries after independence; and
- 3.5 analyse the objectives, achievements and problems of the establishment of regional, continental and intercontinental co-operation.

4.0 EXAMINATION RUBRIC

There will be **one (1)** paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **nine (9)** questions. Candidates will be required to answer a total of **eight (8)** questions which will weigh **100** marks.

Section A will comprise **two (2)** questions. Candidates will be required to answer all the questions in this section. Question 1 will consist of **fifteen (15)** multiple choice items. Each item will carry **one (1) mark**, making a total of **fifteen (15)** marks. Question 2 will comprise **five (5)** matching items. Each item will carry **one (1) mark**, making a total of **five (5)** marks. This section will carry a total of **20** marks.

Section B will consist of **three (3)** short answer questions. Candidates will be required to answer all the questions in this section (questions 3-5). Question 3 will comprise **six (6)** short answer items of which the candidates will be required to provide brief explanations. Each item will carry **two (2)** marks, hence a total of **twelve (12)** marks. Question 4 will consist of **six (6)** jumbled sentences. Each item will carry **two (2)** marks, hence a total of **twelve (12)** marks in this question. Question 5 will comprise **five (5)** short answer items. The candidates will be either required to draw a sketch map/diagram and locate the historical places/events or locate the historical places/events on a given sketch map/diagram. The question will weigh **eleven (11)** marks. This section will carry a total of **35** marks.

Section C will have **four (4)** essay questions. Candidates will be required to answer **three (3)** questions. Each question will carry **15** marks. This section will carry a total of **45** marks.

5.0 EXAMINATION CONTENT

The candidates will be assessed on the following topics:

- 5.1 Sources and importance of History
- 5.2 Evolution of man, technology and environment
- 5.3 Development of economic activities and their impact
- 5.4 Development of social and political systems
- 5.5 Interactions among the people of Africa
- 5.6 Socio-economic development and production in pre-colonial Africa

- 5.7 Africa and the external world
- 5.8 Industrial capitalism
- 5.9 Establishment of colonialism
- 5.10 Colonial administrative systems
- 5.11 Colonial economy
- 5.12 Colonial social services
- 5.13 Crises in the capitalist system
- 5.14 Nationalism and decolonization
- 5.15 Changes in political, social and economic policies in Africa after independence
- 5.16 Africa in international affairs

012 History Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Sources and importance of History							2	4.1
2	Evolution of man, technology and the environment							2	5.5
3	Development of economic activities and their impact							1	3.1
4	Development of social and political systems							2	3.7
5	Interactions among the people of Africa							1	1.3
6	Socio-economic development and production in pre-colonial Africa							1	2
7	Africa and the external world							3	7.3
8	Industrial capitalism							2	4.5
9	Establishment of colonialism							3	8
10	Colonial administrative systems							2	4.7
11	Colonial economy							4	8.6
12	Colonial social services							2	6.2
13	Crises in the capitalist system							2	6.2
14	Nationalism and decolonization							7	16.7
15	Changes in political, social and economic policies in Africa after independence							5	13.6
16	Africa in international affairs							2	4.5
Total Number of Items								41	
Total Percentage Weight									100

013 GEOGRAPHY

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format issued by the National Examinations Council of Tanzania (NECTA). The format is based on the Geography syllabus of 2005. The emphasis in this revised format is on competence-based assessment featuring higher order thinking skills. Despite the changes outlined, there are no changes in the examination content.

2.0 GENERAL OBJECTIVES

The examination will assess the extent to which the candidates can:

- 2.1 demonstrate knowledge of resources at national and global levels;
- 2.2 use the skills of observation, measuring, drawing, recording and interpreting geographical phenomenon and apply them in solving daily life problems; and
- 2.3 apply the socio-economic skills for competing in the labour market of the globalised world.

3.0 GENERAL COMPETENCES

The examination will assess the candidates' ability to:

- 3.1 identify the country's heritage;
- 3.2 use sustainably natural resources to raise the standard of living;
- 3.3 use different ways to overcome day-to-day social and economic constraints;
- 3.4 explain interactions between their country and other countries and draw lessons to solve the existing problems;
- 3.5 draw, locate, present, observe, record, analyse, interpret geographical phenomenon and conduct research;
- 3.6 utilise skills and take appropriate measures to manage the environment; and
- 3.7 utilise socio-economic skills to compete successfully in the labour market within the globalised world.

4.0 EXAMINATION RUBRIC

There will be **one (1)** paper of **three (3)** hours. The paper will consist of three sections A, B and C with a total of **10** questions. The candidates will be required to answer a total of **nine (9)** questions which will weigh **100** marks.

Section A will consist of **two (2)** questions (questions 1- 2). Question **one (1)** will consist of **ten (10)** multiple-choice items. Each item will weigh **one (1)** mark, making a total of **ten (10)** marks. Question **two (2)** will consist of **five (5)** matching items. Each item will weigh **one (1)** mark, making a total of **five (5)** marks. Candidates will be required to answer all the questions. Hence this section will carry **15** marks.

Section B will consist of **five (5)** short answer questions (questions 3-7). Each question will carry **11** marks. Candidates will be required to answer all questions. The section will carry **55** marks.

Section C will consist of **three (3)** essay questions (questions 8-10). The candidates will be required to answer **two (2)** questions. Each question in this section will weigh **15** marks. The whole section will carry **30** marks.

5.0 EXAMINATION CONTENT

The following topics will be assessed:

- 5.1 The concept of geography
- 5.2 The solar system
- 5.3 Major features of the Earth's surface
- 5.4 Weather
- 5.5 Climate
- 5.6 Map reading and interpretation
- 5.7 Photograph reading and interpretation
- 5.8 Elementary surveying and map making
- 5.9 Introduction to research
- 5.10 Application of statistics
- 5.11 Agriculture
- 5.12 Water management for economic development
- 5.13 Sustainable use of forest resources
- 5.14 Sustainable mining

- 5.15 Tourism industry
- 5.16 Manufacturing industry
- 5.17 Sustainable use of power and energy resources
- 5.18 Transport
- 5.19 Structure of the earth
- 5.20 Forces that affect the Earth
- 5.21 Climate and natural regions
- 5.22 Soil
- 5.23 Human population
- 5.24 Settlements
- 5.25 Environmental issues and management

013 Geography Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	The Concept of Geography and Solar System							2	10.1
2	Major features of the Earth and Structure of the earth							1	7.5
3	Weather, Climate and natural regions							2	13.8
4	Map reading and interpretation							1	7.2
5	Photograph reading and interpretation							1	2.2
6	Elementary surveying and map making							1	2.5
7	Introduction to research							1	3.1
8	Application of statistics							1	3.1
9	Agriculture and Water management for economic development							1	6.7
10	Sustainable use of forest resources and Sustainable mining							1	5.1
11	Tourism industry and Transport							1	4.6
12	Manufacturing industry and Sustainable use of power and energy resources							1	7.8
13	Forces that affect the Earth's crust							2	8.0
14	Soil							1	3.1
15	Human population and Settlements							1	7.2
16	Environmental issues and management							1	7.9
Total Number of Items								19	
Total Percentage Weight									100

014 BIBLE KNOWLEDGE

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format issued by the National Examinations Council of Tanzania (NECTA). The format is based on the Bible Knowledge Syllabus of 2012. The improvements that have been made in this format include merging of the two papers to form a single paper which accommodates both the Old and the New Testaments. This has been done to avoid asking similar questions in two different papers. In addition, the revised format emphasises on measuring the students' competences especially in higher order thinking skills. Despite the changes made in the format, there are no changes in the examination content.

2.0 GENERAL OBJECTIVES

The Bible Knowledge examination will assess the extent to which candidates can:

- 2.1 demonstrate the acquired knowledge of Biblical stories, quotations, places, characters (persons) and occasion of the statements;
- 2.2 use the knowledge gained from the Bible to protect and preserve human dignity and environment; and
- 2.3 analyse biblical information and teachings to improve social, cultural, political, economic and technological life in Tanzania.

3.0 GENERAL COMPETENCES

The Bible Knowledge examination will test the candidates' ability to:

- 3.1 explain Biblical stories, quotations, places, characters (persons) and occasion of the statements and ability to bring some interpretation and comments;
- 3.2 apply Biblical instructions and teaching in protecting and preserving of human dignity and environment and improve social, cultural, political, economic and technological life in Tanzania; and
- 3.3 demonstrate knowledge and skills on how to live in peace with other people of different beliefs.

4.0 EXAMINATION RUBRIC

There will be **one (1)** paper of **three (3)** hours. The paper will comprise **13** questions in sections A, and C. Candidates will be required to answer a total of **nine (9)** questions which will weigh **100** marks.

Section A will comprise **two (2)** questions. Question 1 will consist of **20** multiple-choice items from all major topics in the Old Testament and the Acts of Apostles. Each item will weigh **one (1)** mark, making a total of **20** marks. Question 2 will comprise **five (5)** matching items, each carrying **one (1)** mark, making a total of **five (5)** marks. Candidates will be required to answer all the questions. This section will carry a total of **25** marks.

Section B will consist of **eight (8)** short answer questions. Candidates will be required to answer **two (2)** compulsory questions from the Old Testament and the Acts of the Apostles and **three (3)** questions will be chosen from either the Gospel of Matthew or the Gospel of Luke. Each question will carry **nine (9)** marks, making a total of **45** marks.

Section C will consist of **three (3)** essay questions from the Old Testament and the Acts of the Apostles. Candidates will be required to answer **two (2)** questions. Each question will carry a total of **15** marks. This section will carry a total of **30** marks.

5.0 EXAMINATION CONTENT

5.1 Old Testament

- 5.1.1 Creation
- 5.1.2 The fall of man and its outcome
- 5.1.3 Life of Abraham
- 5.1.4 The sons of Isaac
- 5.1.5 The Hebrews in Egypt
- 5.1.6 Israelites' journey through the desert
- 5.1.7 Israel under the leadership of Joshua
- 5.1.8 Israel under the leadership of Judges

5.2 New Testament: The Gospel of Matthew and Luke

- 5.2.1 General introduction: Jewish Institutions and Sects/Parties.
- 5.2.2 The beginning: Birth, childhood and preparation of Jesus'

ministry.

5.2.3 Jesus' public ministry in Galilee.

5.2.4 Jesus' ministry from Galilee to Jerusalem.

5.2.5 Jesus in Jerusalem.

5.2.6 The death and resurrection of Jesus.

5.3 New Testament: The Acts of the Apostles

5.3.1 Introduction to the Book of Acts.

5.3.2 The Community in Jerusalem.

5.3.3 Witnessing in Jerusalem.

5.3.4 Witnessing in Judea and Samaria.

5.3.5 Paul's Missionary Journeys.

014 Bible Knowledge Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Creation							1.5	4.6
2	The fall and its outcome							2.3	7.2
3	Life of Abraham							1.5	4.6
4	The Sons of Isaac							1.7	5.3
5	The Hebrews in Egypt							1.7	5.3
6	Israelites' journey through the desert							2.8	8.6
7	Israel under the leadership of Joshua							2.1	6.6
8	Israel under the leadership of Judges							1.9	5.9
9	General introduction: Jewish institutions and sects/parties							1.2	3.9
10	The beginning: birth, childhood and preparation of Jesus' ministry							1.5	4.6

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
11	Jesus' public ministry in Galilee							2.5	7.9
12	Jesus' ministry from Galilee to Jerusalem							0.6	2.0
13	Jesus in Jerusalem							1.7	5.3
14	The death and resurrection of Jesus							0.8	2.6
15	Introduction to the book of Acts							0.4	1.3
16	The community in Jerusalem							0.8	2.6
17	Witnessing in Jerusalem							1.7	5.3
18	Witnessing in Judea and Samaria							2.5	7.9
19	Paul's missionary journeys							2.8	8.6
Total Number of Items								32	
Total Percentage Weight									100

015 ELIMU YA DINI YA KIISLAMU

(Kwa Watahiniwa Walioko na Wasiokuwa Shuleni)

1.0 UTANGULIZI

Fomati hii ni maboresho ya fomati ya mwaka 2008 iliyotolewa na Baraza la Mitihani la Tanzania. Fomati hii inatokana na muhtasari wa Elimu ya Dini ya Kiislamu wa mwaka 2012. Katika fomati hii, maboresho yamefanyika katika muundo wa mtihani. Badala ya kuwa na karatasi mbili (015 Elimu ya Dini ya Kiislamu 1 & 2), kutakuwa na karatasi moja ya somo la Elimu ya Dini ya Kiislamu. Maboresho haya yamefanyika kutokana na kujirudia kwa mada zilizokuwa zikitahiniwa karatasi ya 1 na ya 2. Aidha katika fomati hii, msisitizo umewekwa kwenye maswali ya umahiri yanayopima ngazi za juu za kufikiri. Hata hivyo, katika fomati hii hakuna mabadiliko katika mada zitakazotahiniwa.

2.0 MALENGO YA JUMLA

Mtihani utapima ni kwa kiwango gani mtahiniwa anaweza:

- 2.1 kuelezea Dini ya Kiislamu;
- 2.2 kuchambua Sura zilizoteuliwa za Qur'an na kueleza uhusiano wake na maisha ya mwanadamu;
- 2.3 kueleza chimbuko la Fiqh na Sharia kwa ujumla;
- 2.4 kuchambua Nguzo za Uislamu na uhusiano wake na maisha ya kila siku;
- 2.5 kueleza Nguzo za Imani na matumizi yake katika kufanya ibada za kila siku; na
- 2.6 kueleza kwa usahihi Historia ya Uislamu.

3.0 UJUZI WA JUMLA

Mtihani utapima uwezo wa mtahiniwa katika:

- 3.1 kueleza maana, dhima, ukusanyaji, uhifadhi na mafunzo ya Hadithi na Sunnah;
- 3.2 kueleza kuhusu kushushwa, kuhifadhiwa na kukusanywa mafunzo ya Sura zilizochaguliwa;
- 3.3 kuthibitisha na kuitetea Qur'an kuwa ni neno la Mwenyezi Mungu;
- 3.4 kueleza dhana ya Dini ya Uislamu;
- 3.5 kuchambua nguzo za imani na nguzo za Uislamu;

- 3.6 kutofautisha Uislamu na imani nyingine;
- 3.7 kuchambua chimbuko la Fiqh;
- 3.8 kuhusisha Fiqh na maisha ya kila siku;
- 3.9 kueleza mtazamo wa Uislamu juu ya Ibada;
- 3.10 kuchambua mfumo wa maisha ya Kiislamu, Kijamii, Kiuchumi na Kisiasa; na
- 3.11 kuchambua nyakati muhimu katika dini ya kiislamu kabla ya Mtume (s.a.w) kipindi cha Mtume (s.a.w), kipindi cha Makhaliifa wa Mtume hadi sasa na maisha ya kila siku ya Waislamu na zama za sasa.

4.0 MAELEKEZO YA MTIHANI

Mtihani utafanywa kwa muda wa saa **tatu (3)**. Mtihani utakuwa na karatasi moja (1) iliyogawanyika katika sehemu A, B na C zenye jumla ya maswali **13**. Mtahiniwa atatakiwa kujibu jumla ya maswali **12**.

Sehemu A itakuwa na maswali **mawili (2)**. Swali la kwanza litakuwa na vipengele **15** vya maswali ya kuchagua na swali la pili litakuwa na vipengele **vitano (5)** vya maswali ya kuonisha. Kila kipengele katika maswali yote mawili kitakuwa na alama **moja (1)**. Mtahiniwa atatakiwa kujibu maswali yote. Sehemu hii itakuwa na jumla ya alama **20**.

Sehemu B itakuwa na maswali **saba (7)** ya majibu mafupi. Mtahiniwa atatakiwa kujibu maswali yote. Kila swali litakuwa na alama **tano (5)**. Sehemu hii itakuwa na jumla ya alama **35**.

Sehemu C itakuwa na jumla ya maswali **manne (4)** ya insha. Mtahiniwa atatakiwa kujibu maswali **matatu (3)**. Kila swali litakuwa na alama **15**. Sehemu hii itakuwa na jumla ya alama **45**.

5.0 MAUDHUI YA MTIHANI

Mada zifuatazo zitapimwa katika mtihani wa somo hili:

- 5.1 Mtazamo wa Uislamu juu ya Elimu
- 5.2 Imani ya Uislamu
- 5.3 Kumjua Mwenyezi Mungu
- 5.4 Mtazamo wa Uislamu juu ya dini
- 5.5 Fiqh
- 5.6 Chimbuko la Fiqh
- 5.7 Mtazamo wa Uislamu juu ya ibada

- 5.8 Dini sahihi anayostahiki mwanadamu
- 5.9 Nguzo za Uislamu
- 5.10 Mambo ya lazima kufanyiwa maiti wa Kiislamu
- 5.11 Nguzo za imani
- 5.12 Familia ya Kiislamu
- 5.13 Mfumo wa jamii ya Kiislamu
- 5.14 Qur'an
- 5.15 Sunnah na Hadithi
- 5.16 Historia ya Mitume walioteuliwa
- 5.17 Bara la Arab zama za Jahiliya
- 5.18 Haki na Uadilifu katika Uislamu
- 5.19 Dola ya Kiislamu Madina
- 5.20 Historia ya Uislamu baada ya Kutawafu Mtume (s.a.w) hadi hivi leo

015 Elimu ya Dini ya Kiislamu: Jedwali la Utahini

S/N	Mada	Nyanja za Utambuzi Zitakazopimwa						Idadi ya Maswali	Asilimia ya uzito kwa Kila Mada
		Kukumbuka	Kuelewa	Kutumia	Kuchambua	Kutathmini	Kuunda		
1	Mtazamo wa Uislamu juu ya elimu							0.4	1.8
2	Imani ya Uislamu							0.4	1.8
3	Kumjua Mwenyezi Mungu							0.3	1.2
4	Mtazamo wa Uislamu juu ya dini							0.4	1.8
5	Fiqh							0.3	1.2
6	Chimbuko la Fiqh							0.2	0.6
7	Mtazamo wa Uislamu juu ya ibada							0.3	1.2
8	Dini sahihi anayostahiki mwanadamu							0.4	1.8
9	Nguzo za Uislamu							4.7	17.9
10	Mambo ya lazima kufanyiwa maiti wa Kiislamu							0.9	3.6
11	Nguzo za Imani							2.0	7.7
12	Familia ya Kiislamu							1.9	7.1
13	Mfumo wa jamii ya Kiislamu							1.3	5.1
14	Qur'an							3.6	14.0
15	Sunnah na Hadithi							3.1	10.5
16	Historia ya Mitume walioteuliwa							0.8	3.0
17	Bara la Arab zama za Jahiliya							1.1	4.2

18	Haki na Uadilifu katika Uislamu							0.6	2.4
19	Dola ya kiislamu Madina							1.9	7.1
20	Historia ya Uislamu baada ya Kutawafu Mtume (s.a.w) hadi hivi leo							1.5	6.0
Jumla ya Maswali								26	
Jumla ya Asilimia ya Uzito wa Maswali									100

016 FINE ART
(For School Candidates Only)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format. The format is based on the Fine Art Syllabus of 2005. Formally, the format focused only on the practical examination assessment. To ensure the standard for the paradigm shift towards competence-based assessment, the Fine Art format has been revised to include a theory paper 016/1 Fine Art 1 and a practical 016/2 Fine Art 2.

2.0 GENERAL OBJECTIVES

The examination will generally measure the extent to which candidates can:

- 2.1 demonstrate knowledge on art theory as well as practical skills and competences in artistic production(s);
- 2.2 apply artistic skills and knowledge in providing quality services and refinement of society and environment for better living standards;
- 2.3 use knowledge and skills to recognise and promote the artistic heritage of Tanzania; and
- 2.4 demonstrate the acquired knowledge, skills and competences that will qualify them to pursue further education or professional arts-based career in the field of Fine Art.

3.0 GENERAL COMPETENCES

The examination will assess the candidates' ability to:

- 3.1 explain terminologies and theories of Fine Art;
- 3.2 create pictorial arts with communicative and aesthetic values;
- 3.3 provide constructive criticism on works of Fine Art;
- 3.4 make drawings, paintings and designs;
- 3.5 produce works of Fine Art using traditional and modern technologies; and
- 3.6 demonstrate entrepreneurship in the field of Fine Art.

4.0 EXAMINATION RUBRIC

The examination will consist of two papers. Paper 016/1 Fine Art 1 (Theory Paper) and Paper 016/2 Fine Art 2 (Practical Paper).

4.1 Paper 016/1 Fine Art 1 (Theory Paper)

This paper will be a **three (3)**-hour examination. It will consist of sections A, B and C with a total of **ten (10)** questions. Candidates will be required to answer a total of **nine (9)** questions which will weigh **100** marks.

Section A will consist of **two (2)** questions. Question 1 will be a multiple-choice question with **15** items. Each item will weigh **one (1)** mark. Question 2 will consist of **five (5)** matching items questions. Each item will weigh **one (1)** mark. Candidates will be required to answer **all** the questions in this section. Hence the total weight for this section will be **20** marks.

Section B will consist of **five (5)** short answer questions. The questions will be set from any topic in the syllabus. Each question will carry **10** marks. Candidates will be required to answer **all** the questions. Therefore the section will carry a total of **50** marks.

Section C will consist of **three (3)** essay questions. The questions will be set from any topic in the syllabus. Candidates will be required to answer **two (2)** questions. Each question will carry **15** marks, making a total of **30** marks.

4.2 Paper 016/2 Fine Art 2 (Practical Paper)

This paper will be of **three (3)** hours. The paper will consist of sections A and B with a total of **four (4)** questions. Candidates will be required to answer a total of **two (2)** questions which weigh **100** marks.

Section A will consist of **two (2)** questions. The questions will be set from drawing and painting topics. Each question will weigh **50** marks. Candidates will be required to answer **one (1)** question. This section will carry a total of **50** marks.

Section B will consist of **two (2)** questions. The questions will be set from designing topic. Each question will weigh **50** marks. Candidates will be required to answer **one (1)** question. This section will carry a total of **50** marks.

5.0 EXAMINATION CONTENT

The topics that will be assessed are as follows:

5.1 016/1 Fine Art 1

- 5.1.1 Theory of Art
- 5.1.2 Drawing
- 5.1.3 Painting
- 5.1.4 Designing
- 5.1.5 Fine Arts entrepreneurship

5.2 016/2 Fine Art 2

- 5.2.1 Drawing
- 5.2.2 Painting
- 5.2.3 Designing

016/1 Fine Art 1 Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Theory of Art							2	6.2
2	Drawing							8	34.3
3	Painting							6	25.8
4	Designing							6	27.5
5	Fine Art Entrepreneurship							2	6.2
Total Number of Items								24	
Total Percentage Weight									100

6/2 Fine Art 2 Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Questions	Percentage Weight Per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Drawing							2	37.0
2	Painting							1	28.4
3	Designing							1	34.5
Total Number of Items								4	
Total Percentage Weight									100

017 MUSIC
(For School Candidates Only)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format. The format is based on the music for Ordinary Level Syllabus issued in 2005. In this format, the emphasis has been placed on the competence-based items approach also inclined towards higher order thinking skills. Despite this emphasis made in the format, there are no changes in the examination content.

2.0 GENERAL OBJECTIVES

The examination will measure the extent to which candidates can:

- 2.1 use skills in reading, writing and listening to music;
- 2.2 demonstrate skills of singing simple melodies at sight;
- 2.3 compose simple rhythms and melodies using aesthetic values;
- 2.4 harmonise simple music;
- 2.5 demonstrate skill of singing melodies of selected songs;
- 2.6 demonstrate procedures of playing traditional and modern musical instruments of Tanzania;
- 2.7 critique musical works based on the principles of good melody; and
- 2.8 explain musical terms and signs related to loudness, softness, speed and expression.

3.1 GENERAL COMPETENCES

The examination will measure the candidates' ability to:

- 3.1 explain terminologies and theories of music;
- 3.2 demonstrate writing and listening skills to music;
- 3.3 perform music (singing and playing musical instruments);
- 3.4 compose music using aesthetic values;
- 3.5 harmonise music;
- 3.6 criticise music works; and
- 3.7 demonstrate entrepreneurship skills.

4.0 EXAMINATION RUBRIC

The examination will consist of two papers. Paper 017/1 Music 1 (Theory Paper) and Paper 017/2 Music 2 (Practical Paper).

4.1 Paper 017/1 Music 1 (Theory Paper)

This paper will be a **three (3)**-hour examination. It will consist of sections A, B and C with a total of **10** questions. Candidates will be required to answer a total of **nine (9)** questions which will weigh **100** marks.

Section A will consist of **two (2)** questions. Question 1 will be a multiple-choice type with **15** items. Question 2 will be a matching item with **five (5)** items. Each item in both multiple-choice and matching items question will weigh **one (1)** mark. Candidates will be required to answer **all** the questions. The section will weigh a total of **20** marks.

Section B will consist of **five (5)** short answer questions from any topic in the syllabus. Each question will weigh **10** marks. Candidates will be required to answer **all** the questions. The section will weigh a total of **50** marks.

Section C will consist of **three (3)** essay questions from any topic in syllabus. Candidates will be required to answer **two (2)** questions. Each question will weigh **15** marks. The section will weigh a total of **30** marks.

4.2 Paper 017/2 Music 2 (Practical Paper)

This paper will last for **two (2) hours** and will consist of **10** practical questions. Each question will weigh **10** marks. Candidates will be required to answer **all** the questions which will weigh **100** marks.

5.0 EXAMINATION CONTENT

The topics that will be assessed are as follows:

5.1 017/1 Music 1

5.1.1 Rudiments of music

5.1.2 Harmony

5.1.3 Applied music

5.2 017/2 Music 2

5.2.1 Rudiments of music

5.2.2 Harmony

5.2.3 Applied music

017/1 Music 1 Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight Per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Rudiment of music							12	50
2	Harmony							8	30
3	Applied music							4	20
Total Number of Items								24	
Total Percentage Weight									100

017/2 Music 2 Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight Per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Rudiment of music							4	40.6
2	Harmony							3	32.5
3	Applied music							2	26.8
Total Number of Items								10	
Total Percentage Weight									100

018 PHYSICAL EDUCATION

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format. The format is based on the Physical Education Syllabus of 2005. There are improvements in this format. Due to introduction of competence-based assessment the skills which were formally assessed in Paper 2 have been accommodated in Paper 1. Therefore, there will be only one paper for this subject. Despite the revision made, there are no changes in the examination content.

2.0 GENERAL OBJECTIVES

The examination will assess the extent to which the candidates can:

- 2.1 demonstrate a sense of obedience, responsibility, self-confidence and co-operation, regardless of gender and socio-economic background;
- 2.2 demonstrate the strength preference and mental abilities in various sports activities;
- 2.3 show skills of practising physical exercises, sports and games and recreational activities; and
- 2.4 apply health rules, render first aid and safety measures at the individual and community levels.

3.0 GENERAL COMPETENCES

The examination will specifically assess the candidates' ability to demonstrate:

- 3.1 skills relating to the social and moral standards of sports behaviour;
- 3.2 neuromuscular skills and physical development;
- 3.3 sports habits and performance skills;
- 3.4 skills related to sports and recreational activities; and
- 3.5 skills to render first aid and safety services at individual and community levels.

4.0 EXAMINATION RUBRIC

This paper will be a **three (3)**-hour examination. It will consist of sections A, B and C with a total of **eleven (11)** questions. Candidates will be required to answer a total of **10** questions which will weigh **100** marks.

Section A will consist of **two (2)** questions. Question 1 will be a multiple-

choice question with 10 items set from all major topics of the syllabus and question 2 will have 5 matching items. Each item will carry **one (1)** mark. Candidates will be required to answer **all** the questions. This section will weigh a total of **15** marks.

Section B will consist of **five (5)** short answer questions. Each question will carry **eight (8)** marks. Candidates will be required to answer **all** the questions. This section will weigh a total of **40** marks.

Section C will comprise **four (4)** essay type questions set from any topic of the syllabus. Each question will carry **15** marks. Candidates will be required to answer **three (3)** questions. This section will weigh a total of **45** marks.

5.0 EXAMINATION CONTENT

The assessment of the candidates will be based on the following topics:

- 5.1 Principles of Physical Education
- 5.2 First Aid
- 5.3 Safety
- 5.4 Health-related physical fitness
- 5.5 Performance-related physical fitness
- 5.6 Gymnastics
- 5.7 Swimming
- 5.8 Recreation and outdoor activities
- 5.9 Ball Games
- 5.10 Track and field events
- 5.11 Racket Games
- 5.12 Management and administration of physical activities

018 Physical Education Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Principles of Physical Education							0.08	0.5
2	First Aid							0.08	0.5
3	Safety							0.08	0.4
4	Health-related physical fitness							0.8	4.2
5	Performance-related physical fitness							0.3	1.4
6	Gymnastics							2	11.4
7	Swimming							1	5.4
8	Recreation and outdoor activities							2	8.4
9	Ball Games							5	23.8
10	Track and field events							4	18
11	Racket Games							4	21
12	Management and Administration of Physical Activities							1	5
Total Number of Items								20	
Total Percentage Weight									100

019 THEATRE ARTS
(For School Candidates Only)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format. The format is based on the Theatre Arts for Ordinary level Syllabus which was issued in 2008. In this format, emphasis is on assessing the students' competences by considering more the higher order thinking skills. However, the examination content remain unchanged despite the adjustment in the format.

2.0 GENERAL OBJECTIVES

The examination will measure the extent to which candidates can:

- 2.1 describe the elements of personal and national culture;
- 2.2 demonstrate various skills in Theatre Arts, elements of Theatre Arts and forms of Theatre Arts;
- 2.3 apply performing techniques in African theatrical performance;
- 2.4 demonstrate skills of Theatre production;
- 2.5 describe the contemporary Theatre practices in Tanzania; and
- 2.6 analyse the cross-cutting issues, their impact upon the society and intervention to be made to enhance Theatre Arts.

3.0 GENERAL COMPETENCES

The examination will measure the candidates' ability to:

- 3.1 demonstrate an understanding of cultural expressions;
- 3.2 apply various skills and forms of Theatre Arts in communicating ideas;
- 3.3 use numerous performing techniques in African Theatre productions;
- 3.4 demonstrate and promote Theatre Arts works;
- 3.5 demonstrate skills necessary for a theatrical production;
- 3.6 show knowledge of contemporary Theatre practices in Tanzania;
- 3.7 analyse cross-cutting issues using Theatre Arts;
- 3.8 perform Theatre Arts works; and
- 3.9 provide intervention possibilities through Theatre Arts.

4.0 EXAMINATION RUBRIC

This paper will be a **three (3)** hours. The paper will consist of sections A, B and C with a total of **10** questions. Candidates will be required to answer a total of **nine (9)** questions which will weigh **100** marks.

Section A will consist of **two (2)** questions. Question **one (1)** will comprise **15** multiple-choice items set from all topics of the syllabus. Each item will weigh **one (1)** mark, making a total of **15** marks. Question **two (2)** will comprise **five (5)** matching items. Each item will carry **one (1)** mark, making a total of **five (5)** marks. Candidates will be required to answer **all** the questions in this section. The section will weigh a total of **20** marks.

Section B will consist of **five (5)** short answer questions set from all the topics of the syllabus. Each question will carry **10** marks. Candidates will be required to answer **all** the questions. The section will weigh a total of **50** marks.

Section C will consist of **three (3)** essay questions set from all the topics of the syllabus. Candidates will be required to answer **two (2)** questions. Each question will weigh **15** marks, hence making a total of **30** marks.

5.0 EXAMINATION CONTENT

The candidates will be assessed on the following topics:

- 5.1 Culture
- 5.2 Art
- 5.3 Theatre Arts
- 5.4 Theatre Arts practices in Tanzania
- 5.5 World Theatre practices
- 5.6 Performing techniques in African Theatre
- 5.7 Performing techniques in selecting non-African Theatre
- 5.8 Theatre production
- 5.9 Theatre for social change
- 5.10 Creation of Theatre performance
- 5.11 Contemporary Theatre Practices.

019 Theatre Arts Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Culture							0	0.8
2	Art							0	1.6
3	Theatre Arts							2	8.0
4	Theatre Arts in Tanzania							2	9.0
5	World Theatre Practices							3	11
6	Performing Techniques in Africa Theatre							2	6
7	Performing Techniques in selecting non-African Theatre							2	8.5
8	Theatre Production							4	22.0
9	Theatre for Social Change							3	11
10	Creation of Theatre Performance							3	11
11	Contemporary Theatre Practices							3	11
Total Number of Items								24	
Total Percentage Weight									100

021 KISWAHILI

(Kwa Watahiniwa Walioko na Wasiokuwa Shuleni)

1.0 UTANGULIZI

Fomati hii ya mtihani imetokana na marekebisho yaliyofanywa katika fomati ya mwaka 2008 iliyotolewa na Baraza la Mitihani la Tanzania. Fomati hii inazingatia muhtasari wa somo la Kiswahili wa mwaka 2010. Maboresho ya fomati yaliyofanyika yamelenga upimaji wa umahiri unaozingatia viwango vya juu vya kufikiri na hakuna mabadiliko katika mada zitakazopimwa.

2.0 MALENGO YA JUMLA

Malengo ya jumla ya mtihani ni kupima kwa kiwango gani mtahiniwa anaweza:

- 2.1 kuwasiliana kwa Kiswahili fasaha katika fani mbalimbali za maisha;
- 2.2 kubaini viashiria vya uthamini wa kiswahili kama sehemu muhimu ya utamaduni wa Tanzania;
- 2.3 kuonesha ujuzi wa kudadisi na kubuni masuala mbalimbali ya lugha na fasihi ya Kiswahili;
- 2.4 kutumia kazi za fasihi katika maisha ya kila siku;
- 2.5 kutumia lugha ya Kiswahili katika miktadha mbalimbali;
- 2.6 kubainisha njia mbalimbali za ukuzaji na uenezaji wa Kiswahili ili kiweze kutumika kwa mawasiliano na nchi jirani na kimataifa;
- 2.7 kujisomea maandiko mbalimbali ya Kiswahili;
- 2.8 kujenga msingi bora na imara wa kujifunza na kujiendeleza; na
- 2.9 kutumia Kiswahili kupata maarifa, mwelekeo na stadi za kijamii, kitamaduni, kiteknolojia na kitaaluma kutoka ndani na nje ya nchi.

3.0 UJUZI WA JUMLA

Utahini kwa kutumia fomati hii utazingatia upimaji wa ujuzi na utendaji wa mtahiniwa katika:

- 3.1 kusikiliza na kuwasiliana kwa Kiswahili sanifu katika miktadha mbalimbali;
- 3.2 kubaini viashiria vya uthamani wa Kiswahili kama lugha ya Taifa;
- 3.3 kusoma maandiko mbalimbali ya Kiswahili kwa ufanisi;
- 3.4 kuandika habari fupi na ndefu kwa Kiswahili sanifu;

- 3.5 kusoma kwa ufahamu na kujisomea ili kupata maarifa na kwa burudani;
- 3.6 kutumia lugha ya kifasihi katika mawasiliano kwa kuzingatia stadi zote za lugha na;
- 3.7 kutafiti vipengele mbalimbali vya lugha ya Kiswahili.

4.0 MAELEKEZO YA MTIHANI

Mtihanu wa somo la Kiswahili utafanywa kwa muda wa saa **tatu (3)**. Mtihani utakuwa na karatasi moja (1) iliyogawanyika katika sehemu A, B na C zenye jumla ya maswali **12**. Mtihaniwa atatakiwa kujibu jumla ya maswali **11** yenye jumla ya alama **100**.

Sehemu A itakuwa na maswali **mawili (2)**. Swali la kwanza litakuwa la kuchagua na litakuwa na jumla ya alama **10**. Swali la pili litakuwa la kuoanisha na litakuwa na jumla ya alama **5**. Mtihaniwa atatakiwa kujibu maswali yote. Sehemu hii itakuwa na jumla ya alama **15**.

Sehemu B itakuwa na maswali **sita (6)** ya majibu mafupi. Swali la 3 na 4 yatakuwa na alama **nne (4)** kwa kila moja ambapo swali la 5 - 8 yatakuwa na alama **nane (8)** kwa kila moja. Mtihaniwa atatakiwa kujibu maswali yote. Sehemu hii itakuwa na jumla ya alama **40**.

Sehemu C itakuwa na jumla ya maswali **manne (4)** ya insha. Mtihaniwa atatakiwa kujibu maswali **matatu (3)**. Sehemu hii itakuwa na jumla ya alama **45**.

5.0 MADA ZA KUTAHINI

- 5.1 Ufahamu
- 5.2 Sarufi
- 5.3 Utumizi wa Lugha
- 5.4 Uandishi
- 5.5 Maendeleo ya Kiswahili
- 5.6 Fasihi

Tanbihi

Orodha ya vitabu vya Fasihi vitakavyotumika katika somo la Kiswahili ni vilivyoidhinishwa na Wizara ya Elimu Sayansi na Teknolojia.

Jedwali la Utahini la 021 Kiswahili

S/N	Mada	Nyanja za Utambuzi Zitakazopimwa						Idadi ya Maswali	Asilimia ya uzito kwa kila Mada
		Kukumbuka	Kuelewa	Kutumia	Kuchambua	Kutathmini	Kuunda		
1	Ufahamu							3.3	15.5
2	Sarufi							4.0	19.5
3	Utumizi wa Lugha							1.2	6.1
4	Uandishi							4.0	19.1
5	Maendeleo ya Kiswahili							1.8	8.8
6	Fasihi							6.5	31.0
Idadi ya Maswali								20.8	
Jumla ya Asilimia ya Uzito wa Maswali									100

022 ENGLISH LANGUAGE

(For Both School and Private Candidates)

1.0 INTRODUCTION

This format is a revised version of the 2008 format issued by the National Examinations Council of Tanzania (NECTA). The format is based on the English Language syllabus of 2010. In this format, the emphasis is on using competence-based assessment approach featuring higher order thinking skills. Despite the changes made in the format, there are no changes in the examination content.

2.0 GENERAL OBJECTIVES

The examination will generally measure the extent to which candidates can:

- 2.1 express themselves in both spoken and written English Language;
- 2.2 demonstrate skills on reading widely for pleasure and for information;
- 2.3 perform a variety of writing tasks according to the required principles;
- 2.4 use the knowledge of the English Language to demonstrate awareness and consciousness of the basics of the society and the part they can play in its development;
- 2.5 use the knowledge of the English Language in furthering their education; and
- 2.6 communicate effectively with other speakers of the English Language both inside and outside the country.

3.0 GENERAL COMPETENCES

The examination will measure the candidates' ability to:

- 3.1 use the English Language appropriately to communicate in a variety of settings;
- 3.2 use the English Language to write a variety of things in different contexts;
- 3.3 use the English Language to demonstrate their ability to read and comprehend written documents; and
- 3.4 use the English Language to achieve academically in all the content areas.

4.0 EXAMINATION RUBRIC

The examination will consist of **one (1)** paper of **three (3)** hours. The paper will consist of three sections A, B and C with a total of **12** questions. Candidates will be required to answer a total of **11** questions which will weigh **100** marks.

Section A will comprise **two (2)** questions. Question **one (1)** will consist of 10 multiple-choice items. Each item will carry **one (1)** mark. Question **two (2)** will consist of 5 matching items. Each item will carry **one (1)** mark. The candidates will be required to answer **all** the questions. This section will carry a total of **15** marks.

Section B will consist of **six (6)** short answer questions and the candidates will be required to answer **all** the questions. Question **three (3)** and **four (4)** will carry **four (4)** marks each while questions **5-8** will carry **eight (8)** marks each. Total weight in this section will be **40** marks.

Section C will have a total of **four (4)** essay questions. The candidates will be required to attempt **three (3)** questions. Each question will carry **15** marks. The whole section will carry a total of **45** marks.

5.0 EXAMINATION CONTENT

The following topics will be assessed:

- 5.1 Listening to and understanding simple texts about a variety of events and situation
- 5.2 Giving directions
- 5.3 Using a dictionary
- 5.4 Expressing personal and group routine/habits
- 5.5 Expressing ongoing activities
- 5.6 Expressing likes and dislikes
- 5.7 Talking about one's family
- 5.8 Expressing opinions and feelings
- 5.9 Talking about past events/ activities
- 5.10 Expressing future plans/activities
- 5.11 Reading a variety of texts
- 5.12 Interpreting literary works

- 5.13 Analysing information from the media
- 5.14 Writing personal letters
- 5.15 Taking notes
- 5.16 Writing a variety of texts
- 5.17 Asking for services
- 5.18 Locating places
- 5.19 Giving description
- 5.20 Talking about cultural activities
- 5.21 Expressing opinions
- 5.22 Reading for comprehension
- 5.23 Writing cards and messages
- 5.24 Using appropriate language content and style in speaking
- 5.25 Reading literary works
- 5.26 Writing using appropriate language content and style
- 5.27 Writing formal letters
- 5.28 Expressing oneself

Note: The list of readings in literary works to be used in this subject are those which have been approved by the Ministry of Education, Science and Technology.

022 English Language Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Listening to and understanding simple texts about a variety of events and situation							2.8	13.1

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
2	Giving directions							0.2	1.1
3	Using a dictionary							0.1	0.6
4	Expressing personal and group routine/habits							0.4	1.7
5	Expressing on-going activities							0.2	0.8
6	Expressing likes and dislikes							0.4	1.7
7	Talking about one's family							1	4.9
8	Expressing opinions and feelings							0.8	3.8
9	Talking about past events/activities							1.4	6.7
10	Expressing future plans/activities							0.2	0.8
11	Reading a variety of texts							1.1	5.4
12	Interpreting literary works							0.8	3.8
13	Analysing information from the media							0.9	4.1
14	Writing personal letters							0.2	0.8
15	Taking notes							0.3	1.6
16	Writing a variety of texts							0.3	1.5
17	Asking for services							0.4	2.1
18	Locating places							0.2	1.1
19	Giving description							0.2	1.1
20	Talking about cultural activities							0.6	2.7
21	Expressing opinions							0.2	1.1
22	Reading for comprehension							0.5	2.3
23	Writing cards and messages							1.1	5.1
24	Using appropriate language content and style in speaking							1.3	6.1

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
25	Reading literary works							1.8	8.7
26	Writing using appropriate language content and style							2.9	14.0
27	Writing formal letters							0.2	2.7
28	Expressing oneself							0.2	1.7
Total Number of Items								21	
Total Percentage Weight									100

023 FRENCH LANGUAGE

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format issued by the National Examinations Council of Tanzania (NECTA). The new examination format is based on the 2010 French Language syllabus. The new format has been revised to focus on the competence-based assessment also highlighting higher order thinking skills. Despite the changes made, there is no change in the content of the examination.

2.0 GENERAL OBJECTIVES

The examination will measure the extent to which the candidate can:

- 2.1 communicate in the French Language in a simple way in various situations;
- 2.2 read and write the texts and letters correctly in a simple French;
- 2.3 express feelings, ideas and attitudes;
- 2.4 demonstrate skills of using the French language appropriately; and
- 2.5 demonstrate skills of using vocabulary appropriately.

3.0 GENERAL COMPETENCES

The examination will measure the candidates' ability to:

- 3.1 demonstrate skills of writing a simple text in French;
- 3.2 use French for communication in basic needs in various situations;
- 3.3 express themselves correctly in written French;
- 3.4 read and comprehend a written text in French; and
- 3.5 use French grammatical patterns correctly.

4.0 EXAMINATION RUBRIC

This examination will consist of **one (1)** paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **11** questions. Candidates will be required to answer a total of **10** questions which will weigh **100** marks.

Section A will consist of **two (2)** questions. Question **one (1)** will have **10** multiple-choice items. Question **two (2)** will consist of **five (5)** matching

items. Each item in question 1 and 2 will weigh **one (1)** mark. Candidates will be required to answer **all** questions. This section will consist of **15** marks.

Section B will consist of a total of **seven (7)** short answer questions of which one will be on summarising a passage. The total number of items in this section will be **forty two (42)**. Each question will carry **10** marks, making a total of **70** marks for this section. The candidates will be required to answer **all** the questions.

Section C will have a total of **two (2)** essay questions. Each question will consist of **15** marks. Candidates will be required to attempt **one (1)** question. Therefore, this section will carry a total of **15** marks.

5.0 EXAMINATION CONTENT

The candidates will be tested on the following topics:

- 5.1 Greetings
- 5.2 Saying Goodbye
- 5.3 Introducing yourself and others
- 5.4 Talking about things surrounding us
- 5.5 Expressing quantity
- 5.6 Telling time
- 5.7 Talking about dates, months and years
- 5.8 Expressing habits/routines
- 5.9 Expressing likes and dislikes
- 5.10 Characterising things and people
- 5.11 Talking about past events
- 5.12 Expressing comparisons
- 5.13 Giving permission, order and refusing
- 5.14 Expressing feelings
- 5.15 Localising places
- 5.16 Expressing suggestions
- 5.17 Expressing future plans
- 5.18 Talking about seasons and weather
- 5.19 Talking about our journeys
- 5.20 Reading for comprehension
- 5.21 Writing letters
- 5.22 Listening and understanding simple texts
- 5.23 Expressing wishes and opinions
- 5.24 Composition writing
- 5.25 Debates

023 French Language Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Greetings							0	0
2	Saying Goodbye							0	0
3	Introducing yourself and others							3	5.45
4	Talking about things surrounding us							3	5.45
5	Expressing quantity							1	1.81
6	Telling time							1	1.81
7	Talking about dates, months and years							1	1.81
8	Expressing habits/routines							4	7.27
9	Expressing likes and dislikes							1	1.81
10	Characterising things and people							2	3.63
11	Talking about past events							6	10.90
12	Expressing comparisons							2	3.63
13	Giving permission, order and refusing							2	3.63

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
14	Expressing feelings							1	1.81
15	Localising places							2	3.63
16	Expressing suggestions							6	10.90
17	Expressing future plans							4	7.27
18	Talking about seasons and weather							5	9.09
19	Talking about our journeys							2	3.63
20	Reading for comprehension							5	9.09
21	Writing letters							1	1.81
22	Listening and understanding simple texts							0	0
23	Expressing wishes and opinions							1	1.81
24	Composition writing							2	3.63
25	Debates							0	0
Total Number of Items								55	
Total Percentage Weight									100

024 LITERATURE IN ENGLISH

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format issued by the National Examinations Council of Tanzania (NECTA). In this revision, emphasis has been placed on competence-based assessment featuring higher order skills. However, there are no changes in the examination content.

2.0 GENERAL OBJECTIVES

The examination will assess the extent to which the candidate can:

- 2.1 use the knowledge of theories of literature, literary genres, form and content in plays, novels, short stories and poetry;
- 2.2 produce continuous narratives, arguments or pieces of descriptive or informative writing e.g., of a character, plot, a scene, message, or an event;
- 2.3 analyse critically different issues of literature that are related to everyday life;
- 2.4 adopt what he or she has learnt in the subject to improve his or her language competence and to further his or her life and education.

3.0 GENERAL COMPETENCES

The examination will assess the ability of candidates to:

- 3.1 recall the meaning of literature as an artistic expression of the people's culture;
- 3.2 demonstrate knowledge of style in writing;
- 3.3 differentiate between form and content in novels, short stories, plays and poetry;
- 3.4 define literary terms and exemplify literary genres;
- 3.5 describe the roles of characters in plays, novels and short stories and relate their behaviour and actions to everyday life; and
- 3.6 differentiate poetry from prose and plays.

4.0 EXAMINATION RUBRIC

The examination will consist of **one (1)** paper of **three (3)** hours. There will be three sections A, B and C with a total of **ten (10)** questions. Candidates will be required to answer a total of **nine (09)** questions which will weigh **100** marks.

Section A will comprise **two (2)** questions. Question **one (1)** will comprise 10 multiple-choice items. Each item will carry **one (1)** mark. Question **two (2)** will comprise 5 matching items. Each item will carry **one (1)** mark. The candidates will be required to attempt **all** the questions in this section. The section will carry a total of **15** marks.

Section B will consist of **four (4)** short answer questions. Each question will weigh **ten (10)** marks. Candidates will be required to attempt **all** the questions. This section will weigh **40** marks.

Section C will consist of **four (4)** essay-type questions. Each item will weigh **15** marks. Candidates will be required to attempt **three (3)** questions. Of these, **two (2)** will be compulsory and **one (1)** will be chosen from the two optional questions. This section will weigh **45** marks.

5.0 EXAMINATION CONTENT

5.1 Theories of Literature

5.2 Form and content in a literary work

5.3 Plays (role of characters, audience, message, language and actions from the selected plays). The list of texts for ‘Plays’ for reference will be:

The Lion and the Jewel - Soyinka, W.

The Trials of Brother Jero - Soyinka, W.

The Dilemma of a Ghost - Aidoo, A.A.

The Government Inspector - Gogol, N.

5.4 Novels and short stories—Form and content, characters and their role in educating the reader.

The list of ‘Novels’ and ‘Short Stories’ under this section will be:

A Walk in the Night and Other Stories - La Guma, A.

Houseboy - Oyono, F.

The Old Man and the Medal - Oyono, F.

The Concubine - Amadi, E.

5.5 Poetry—Form and Content in Poetry

The reference for Poetry will be ‘Selected Poems’ compiled by the Tanzania Institute of Education (TIE) and ‘Growing up with Poetry’ edited by David Rubadiri.

Note: Apart from the list of readings mentioned, those texts subsequently approved by the Ministry of Education, Science and Technology will be used.

024 Literature in English Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Theories of Literature							13	70
2	Plays							2	10
3	Novels and Short Stories							2	10
4	Poetry							2	10
Total Number of Items								19	
Total Percentage Weight									100

025 ARABIC LANGUAGE

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format issued by the National Examinations Council of Tanzania (NECTA). The format is based on the Arabic Language for Ordinary level syllabus issued in 1995. In this format, the emphasis is on using competence-based assessment also manifested by higher order thinking skills. However, there are no changes in the examination content.

2.0 GENERAL OBJECTIVES

The examination will assess the extent to which the candidates can:

- 2.1 comprehend texts written in Arabic;
- 2.2 summarise texts written in Arabic;
- 2.3 use knowledge of Arabic rhetorical words in furthering their education;
- 2.4 apply correctly the Arabic; and
- 2.5 write correct Arabic composition.

3.0 GENERAL COMPETENCES

The examination will assess the candidates' ability to:

- 3.1 read for comprehension on the Arabic text;
- 3.2 write a summary of a given Arabic text;
- 3.3 analyse rhetoric sentences, poem and prose;
- 3.4 write composition in Arabic communicatively; and
- 3.5 write literary responses from a given set of literary readings.

4.0 EXAMINATION RUBRIC

The examination will consist of **one (1)** paper of **three (3)** hours. There will be three sections A, B and C with a total of **twelve (12)** questions in this paper. Candidates will be required to answer a total of **11** questions which will weigh **100** marks.

Section A will have **two (2)** questions. One question will be a multiple-choice question with **ten (10)** items and another will be a matching items question with **five (5)** items. Multiple-choice items will weigh **ten (10)**

marks and matching items will weigh **five (5)** marks. Candidates will be required to answer both questions. These will account for a total of **fifteen (15)** marks.

Section B will have **six (6)** short answer questions. The candidates will be required to answer **all** the questions under this section. Each question will carry **six (6)** marks except question **3** which will carry **ten (10)** marks. Thus, the section will weigh a total of **40** marks.

Section C will comprise **four (4)** essay questions. Candidates will be required to answer **three (3)** questions. Each question will carry **15** marks. The section will weigh a total of **45** marks.

5.0 EXAMINATION CONTENT

The candidates will be tested on the following topics:

- 5.1 Nouns
- 5.2 Dictation
- 5.3 Demonstrative pronouns
- 5.4 Relative pronouns
- 5.5 Verbal Sentences
- 5.6 Nominal Sentences
- 5.7 Pronouns
- 5.8 Numbers
- 5.9 Reading for comprehension
- 5.10 Rhetoric
- 5.11 Writing a variety of texts
- 5.12 Meaningful sentences
- 5.13 Composition
- 5.14 Analysing words in the sentences
- 5.15 Inflection and Inflected
- 5.16 Preposition
- 5.17 Adjective
- 5.18 Adverbs
- 5.19 Object
- 5.20 Tenses
- 5.21 Genitive construction
- 5.22 Expression
- 5.23 Invalidating nouns and Defective verbs
- 5.24 Writing formal and informal letters
- 5.25 Response to literary reading of prescribed set of books
- 5.26 Subject of the passive voice.

025 Arabic Language Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Nouns							1	4.5
2	Dictation							0	0.9
3	Demonstrative pronouns							0	0.9
4	Relative pronouns							0	0.9
5	Verbal sentences							1	4.5
6	Nominal sentences							1	9.0
7	Pronouns							1	4.5
8	Numbers							0	0.9
9	Reading for comprehension							1	4.5
10	Rhetoric							0	0.9
11	Writing a variety of texts							1	4.5
12	Meaningful sentences							1	4.5
13	Composition							1	4.5
14	Analysing words in the sentences							1	4.5
15	Inflection and inflicted							1	4.5

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
16	Preposition							1	4.5
17	Adjective							1	4.5
18	Adverbs							1	4.5
19	Object							1	4.5
20	Genitive construction							1	4.5
21	Tenses							1	4.5
22	Expression							1	4.5
23	Invalidating nouns and defective verbs							1	4.5
24	Writing formal and informal letters							1	4.5
25	Response to literary reading of prescribed set of books							2	9.0
26	Subject of the passive voice							0	0.9
Total Number of Items								21	
Total Percentage Weight									100

026 CHINESE LANGUAGE

(For Both School and Private Candidates)

1.0 INTRODUCTION

The 2018 Chinese Language subject format for the Certificate of Secondary Education Examination (CSEE) is based on the 2015 Chinese Language syllabus. The format has been prepared to enable both teachers and students to know how the Chinese Language subject will be assessed based on the syllabus requirements.

2.0 GENERAL OBJECTIVES

The examination will generally measure the candidates' ability to:

- 2.1 read and comprehend slightly complex texts in Chinese.
- 2.2 express themselves in both spoken and written Chinese.
- 2.3 perform a variety of writing tasks according to the required Chinese conventions.
- 2.4 Use the knowledge of the Chinese Language to demonstrate awareness and consciousness of basics of society and the part they can play in its development.
- 2.5 Use the knowledge of Chinese to advance academically.
- 2.6 communicate effectively with other speakers of Chinese Language both inside and outside the country.

3.0 GENERAL COMPETENCES

The examination will measure the candidates' ability to:

- 3.1 use appropriate Chinese to communicate in various situations and settings.
- 3.2 read and understand slightly complex texts in Chinese.
- 3.3 write a variety of slightly complex texts in Chinese using pinyin.
- 3.4 read a variety of texts and relate them to real life situations.
- 3.5 use Chinese to achieve academically in all content areas.

4.0 EXAMINATION RUBRIC

The examination will consist of **one (1)** paper of **three (3)** hours. The paper will consist of sections A, B, C, D, and E with a total of **13** questions. Candidates will be required to answer **all** the questions in each section which will weigh **100** marks.

Section A: Comprehension

The section will have **two (2)** questions with **five (5)** items each. One question will involve reading a passage and responding to either multiple-choice or blank filling items. The other question will involve reading a short passage and responding to questions that follow requiring short answers. Each question will carry **ten (10)** marks. The section will carry **20** marks.

4.1 Section B: Patterns and Vocabulary

The section will have **three (3)** questions with **five (5)** items each. The questions will involve writing pinyin according to the given Chinese character; writing character according to the given pinyin; and filling in the blanks with the correct Chinese characters or pinyin. The questions are designed to test the candidates' ability to use Chinese vocabulary in familiar communicative situations. The questions on writing pinyin using given Chinese character and that on writing character according to the given pinyin will carry **five (5)** marks each. The question on filling in the blanks with the correct Chinese characters or pinyin will carry **ten (10)** marks. The whole section will comprise **twenty (20)** marks.

4.2 Section C: Grammar Patterns

The section will have **three (3)** questions with **five (5)** items each. The questions will involve multiple-choice, blank filling and re-arranging jumbled words in a logical order to form meaningful sentences. The multiple-choice and blank filling questions will carry **five (5)** marks each. The questions on re-arranging jumbled words in a logical order to form meaningful sentences will carry **ten (10)** marks. The whole section will comprise **20** marks.

4.3 Section D: Language Use

The section will have **three (3)** questions with **five (5)** items each. The questions will involve matching items; short answer items or filling in the blank spaces with given words or phrases. The questions are designed to test the candidates' ability to use appropriate grammatical structures in familiar communicative situations. The matching items and filling in the blank spaces questions will carry **five (5)** marks each. The short answers questions will carry **ten (10)** marks. The whole section will comprise **20** marks.

4.4 Section E: Composition

The section will have **two (2)** questions. One question will involve writing a **free** or a **guided** composition using Chinese characters. The other question will involve re-arranging five jumbled sentences in a logical order to form a meaningful story/paragraph. The questions are designed to test candidates' ability to express their ideas and thoughts in writing in an organised way. Each question will carry **ten (10)** marks. The whole section will comprise **20** marks.

5.0 EXAMINATION CONTENT

The candidates will be assessed on the following language aspects:

- 5.1 Comprehension
- 5.2 Vocabulary
- 5.3 Grammar patterns
- 5.4 Language use
- 5.5 Composition

026 Chinese Language Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Comprehension							2	15
2	Patterns and vocabulary							3	23.1
3	Grammar patterns							3	23.1
4	Language use							3	23.1
5	Composition							2	15
Total Number of Items								13	
Total Percentage Weight									100

031 PHYSICS

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 2010 syllabus. The revised format emphasises on the assessment of candidates' competences in higher order thinking skills. The improvements made in the format, however, do not affect the examination content, which remains unchanged.

2.0 GENERAL OBJECTIVES

The examination will assess the extent to which the candidates are able to:

- 2.1** develop knowledge on concepts, laws, theories and principles of Physics;
- 2.2** apply procedures of scientific investigation;
- 2.3** use scientific principles on conservation and sustainable use of the environment;
- 2.4** promote manipulative skills to manage various technological appliances; and
- 2.5** develop the language of communication in Physics.

3.0 GENERAL COMPETENCES

The examination will assess the candidates' ability to:

- 3.1** apply Physics knowledge, principles and concepts in daily life;
- 3.2** apply scientific methods in solving problems in daily life;
- 3.3** apply technological skills in conservation and sustainable use of the environment;
- 3.4** manage simple technological appliances; and
- 3.5** use the language of Physics in communication.

4.0 EXAMINATION RUBRIC

The examination will consist of two papers. Paper 1 (031/1 Physics 1 Theory Paper) and Paper 2 (031/2 Physics 2 Practical Paper).

4.1 031/1 Physics 1

This examination paper will be for **three (3)** hours. It will consist of three sections: A, B and C with a total of **11** questions. Candidates will be required to answer a total of **10** questions which will weigh **100** marks.

Section A will consist of **two (2)** questions with question 1 being a multiple choice question with **10** items. Question 2 will be matching items with **five (5)** items. Each item in both the multiple choice and matching items questions will weigh **one (1)** mark, making a total of **15** marks in this section. Candidates will be required to answer **all** the questions.

Section B will consist of **six (6)** short answer questions each carrying **10** marks. Candidates will be required to answer **all** the questions. This section will weigh a total of **60** marks.

Section C will consist of **three (3)** short answer questions aimed to assess the candidates' skills in managing the application of Physics and other simple technological appliances in everyday life. The candidates will be required to answer **two (2)** questions from this section. Each question will carry **12.5** marks, making a total of **25** marks in this section.

4.2 031/2 Physics 2

This paper will be either the Actual Practical or Alternative to the Practical. Three equivalent alternatives of the actual practical papers (031/2A Physics 2A, 031/2B Physics 2B and 031/2C Physics 2C) will be set. Only one alternative to practical (031/2 Physics 2) will be set. Candidates will be required to sit for either actual practical or alternative to practical paper.

The Actual Practical paper will be for $2\frac{1}{2}$ hours. The paper will consist of **two (2)** questions and candidates will be required to answer **all** the questions. Question 1 will be from the Mechanics topics and question 2 will be either from Heat, Light, Waves or Electricity topics. Each question will carry **25** marks, hence a total of **50** marks.

The Alternative to Practical paper will be of $2\frac{1}{2}$ hours. The paper will consist of **five (5)** questions. Candidates will be required to answer **all** the questions. Each question will carry **10** marks, making a total of **50** marks. This paper will cover various topics as outlined in sub-section 5.3.

Note

- (i) The actual practical paper will have more than one alternative paper, which will be sent to schools depending on the number of candidates. Alternative A will be sent to schools with up to **100** candidates, alternatives A and B to schools with candidates not exceeding 200 and alternatives A, B and C to schools with more than 200 candidates.
- (ii) A check-list of apparatuses, equipment and materials required for the examination will be sent to the schools not less than three months before the date of sitting for this paper. However, **24 hours advance instructions** will be dispatched in advance to be opened 24 hours for laboratory arrangements before the time of beginning the examinations.
- (iii) When answering the questions in both theory and practical papers, candidates will be allowed to use non-programmable calculators.

5.0 EXAMINATION CONTENT

5.1 031/1 Physics 1 (Theory)

- 5.1.1 Introduction to Physics
- 5.1.2 Introduction to laboratory practice
- 5.1.3 Measurement

- 5.1.4 Force
- 5.1.5 Archimedes' Principle and Law of Floatation
- 5.1.6 Structure and properties of matter
- 5.1.7 Pressure
- 5.1.8 Work, Energy and Power
- 5.1.9 Light
- 5.1.10 Static electricity
- 5.1.11 Current electricity
- 5.1.12 Magnetism
- 5.1.13 Forces in equilibrium
- 5.1.14 Simple machines
- 5.1.15 Motion in a straight line
- 5.1.16 Newton's Laws of Motion
- 5.1.17 Temperature
- 5.1.18 Sustainable energy sources
- 5.1.19 Application of vectors
- 5.1.20 Friction
- 5.1.21 Optical instruments
- 5.1.22 Thermal expansion
- 5.1.23 Transfer of thermal energy
- 5.1.24 Measurement of thermal energy
- 5.1.25 Vapour and humidity
- 5.1.26 Waves
- 5.1.27 Electromagnetism
- 5.1.28 Radioactivity
- 5.1.29 Thermionic emission
- 5.1.30 Electronics
- 5.1.31 Elementary astronomy
- 5.1.32 Geophysics

5.2 031/2 Physics 2 (Actual Practical)

- 5.2.1 Mechanics
- 5.2.2 Heat
- 5.2.3 Light
- 5.2.4 Waves
- 5.2.5 Electricity

5.3 031/2 Physics 2 (Alternative to Practical)

5.3.1 Mechanics

5.3.2 Heat

5.3.3 Light

5.3.4 Waves

5.3.5 Electricity

5.3.6 Magnetism

5.3.7 Electronics

5.3.8 Radioactivity

031/1 Physics 1 Table of Specification

<u>S/N</u>	Topics	Skills to be tested						Number of Questions/Items	Percentage Contribution per topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Introduction to Physics and Introduction to Laboratory Practice							1	4.1 6
2	Measurement							1	4.1 6
3	Friction, Force and Pressure							1	4.1 6
4	Archimedes Principle and Law of Flotation							1	4.1 6
5	Structure and Properties of Matter							1	4.1 6

<u>S/N</u>	Topics	Skills to be tested						Number of Questions/Items	Percentage Contribution per topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
6	Work, Energy and Power							1	4.1 6
7	Light and Optical Instruments							2	8.3 3
8	Static Electricity, Current Electricity and Magnetism							2	8.3 3
9	Forces in Equilibrium							1	4.1 6
10	Simple Machines							1	4.1 6
11	Motion in Straight Line and Newton's Laws of Motion							1	4.1 6
12	Temperature and Sustainable Energy Sources							1	4.1 6
13	Applications of Vectors, Vapour and Humidity							1	4.1 6
14	Thermal Expansion							1	4.1 6

<u>S/N</u>	Topics	Skills to be tested						Number of Questions/Items	Percentage Contribution per topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
15	Transfer of Thermal Energy and Measurement of Thermal Energy							1	4.1 6
16	Waves							3	12. 5
17	Electromagnetism							1	4.1 6
18	Thermionic Emission and Radioactivity							1	4.1 6
19	Electronics							1	4.1 6
20	Elementary Astronomy and Geophysics							1	4.1 6
Total Number of Items								24	
Total Percentage Weight									100

031/2 Physics 2 (Actual Practical) Table of Specification

S/N	Topics	Skills to be Tested						Number of Questions per Topic	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Mechanics							1	50
2	Heat, Light, Electricity or Waves							1	50
Total Number of Questions								2	
Total Percentage Weight									100

s

031/2 Physics 2 (Alternative to Practical) Table of Specification

S/N	Topics	Skills to be Tested						Number of Questions	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Mechanics							1	20
2	Heat, Light or Waves							1	20
3	Electricity, Magnetism, Electronics and							3	60

	Radioactivity								
Total Number of Questions								5	
Total Percentage Weight									100

032 CHEMISTRY

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 2010 syllabus. The current format emphasizes on competence based assessment that will require candidates to think critically and creatively. However, there are no changes made to the examination content.

2.0 GENERAL OBJECTIVES

The examination will assess the extent to which candidates are able to:

- 2.1 apply chemistry knowledge, skills and principles in everyday life activities;
- 2.2 design and perform experiments;
- 2.3 use symbols, formulae and equations to communicate in chemistry; and
- 2.4 apply the scientific principles and knowledge in exploitation of natural resources with conservation of the environment.

3.0 GENERAL COMPETENCES

The examination will specifically test the candidates' ability to:

- 3.1 use chemistry knowledge, skills and principles in solving daily life problems;
- 3.2 apply knowledge on chemistry in doing various activities and/ or experiments;
- 3.3 apply chemical symbols, formulae and equations to communicate in chemistry; and
- 3.4 use scientific and technological skills in conserving and making sustainable use of the environment.

4.0 EXAMINATION RUBRIC

The examination will consist of two papers. Paper 1 (032/1 Chemistry 1 Paper) and Paper 2 (032/2 Chemistry 2 Paper).

4.1 032/1 Chemistry 1

This will be a theory paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will be required to answer a total of **13** questions which will weigh **100** marks.

Section A will consist of two **(2)** questions. One question will be a multiple choice with 10 items carrying **one (1)** mark each. Another question will consist of **five (5)** matching items carrying **one (1)** mark each. Candidates will be required to answer **both** questions. This section will weigh a total of **15** marks.

Section B will consist of **10** short answer questions, each carrying **seven (7)** marks. Candidates will be required to answer **all** the questions. This section will weigh a total of **70** marks.

Section C will consist of **two (2)** questions which will either be essay or structured questions, each carrying **15** marks. Candidates will be required to answer only **one (1)** question.

4.2 032/2 Chemistry 2

This paper will either be Actual Practical or Alternative to Practical. Three equivalent alternatives of the actual practical paper (032/2A Chemistry 2A, 032/2B Chemistry 2B and 032/2C Chemistry 2C) will be set. Only one alternative to practical paper (032/2 Chemistry 2) will be set. Candidates will be required to sit for either the actual practical or the alternative to practical paper.

The actual practical paper will be for **2½** hours. This paper will consist of **two (2)** questions. Candidates will be required to answer **all** the questions. Each question will carry **25** marks, making a total of **50** marks.

The alternative to practical paper will be of **2½** hours. This paper will consist of **five (5)** questions. Candidates will be required to

answer **all** the questions. Each question will carry **10** marks, making a total of **50** marks.

Note

- (i) The actual practical paper will have more than one alternative paper which will be sent to schools depending on the number of candidates. Alternative A will be sent to schools with up to **100** candidates, alternatives A and B to schools with candidates up to 200 and alternatives A, B and C to schools with more than 200 candidates.
- (ii) A check-list of apparatuses and chemicals required for the examination will be sent to schools not less than three months before the date of sitting for the actual practical paper. However, **24 Hours Advance Instructions** will be dispatched in advance for opening 24 hours before the beginning of the examinations for laboratory arrangements to be made.
- (iii) The use of authorised Qualitative Analysis Guide Booklets and non-programmable calculators will be allowed in the examination room.

5.0 EXAMINATION CONTENT

5.1.1 032/1 Chemistry 1

- 5.1.1 Introduction to chemistry
- 5.1.2 Laboratory techniques and safety
- 5.1.3 Heat sources and flames
- 5.1.4 The scientific procedures
- 5.1.5 Matter
- 5.1.6 Air, combustion, rusting and fire fighting
- 5.1.7 Oxygen and hydrogen
- 5.1.8 Water
- 5.1.9 Fuels and energy
- 5.1.10 Atomic structure
- 5.1.11 Periodic classification
- 5.1.12 Formula bonding and nomenclature

- 5.1.13 Chemical equations
- 5.1.14 Hardness of water
- 5.1.15 Acids, bases and salts
- 5.1.16 The mole concept and related calculations
- 5.1.17 Volumetric analysis
- 5.1.18 Ionic theory and electrolysis
- 5.1.19 Chemical kinetics, equilibrium and energetics
- 5.1.20 Extraction of metals
- 5.1.21 Compounds of metals
- 5.1.22 Non-metals and their compounds
- 5.1.23 Organic chemistry
- 5.1.24 Soil chemistry
- 5.1.25 Pollution
- 5.1.26 Qualitative analysis

- 5.1.2 032/2 Chemistry Actual Practical**
 - 5.1.2.1 Qualitative Analysis
 - 5.1.2.2 Chemical Kinetics, Equilibrium and Energetics topics.
 - 5.1.2.3 Ionic theory and electrolysis

- 5.1.3 032/2 Chemistry Alternative to Practical**
 - 5.1.3.1 Volumetric Analysis
 - 5.1.3.2 Laboratory Techniques and Safety topics
 - 5.1.3.3 Qualitative Analysis
 - 5.1.3.4 Chemical Kinetics, Equilibrium and Energetics topics.
 - 5.1.3.5 Ionic theory and electrolysis

032 Chemistry 1 Table of Specification

S/N	Topics	Skills to be Tested						Number of Questions	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Introduction to chemistry and Laboratory techniques and safety							1	4.3
2	Heat sources and flames							1	1.5
3	The scientific procedures							1	1.8
4	Matter							2	10.5
5	Air, combustion, rusting and fire fighting							1	3.6
6	Oxygen and Hydrogen							1	2.2
7	Water							1	1.8
8	Fuels and energy							1	3.6
9	Atomic structure							1	4.4
10	Periodic classification							1	2.0
11	Formula bonding and nomenclature							1	6.5
12	Chemical equations							1	1.1
13	Hardness of water							1	1.5
14	Acids, bases and salts							1	5.1
15	The mole concept and related calculations							1	2.2
16	Volumetric analysis							1	3.3
17	Ionic theory and electrolysis							1	4.0
18	Chemical kinetics, equilibrium and energetics							1	6.2
19	Extraction of metals							1	2.9
20	Compounds of metals							1	3.6
21	Non-metals and their compounds							2	9.1

S/N	Topics	Skills to be Tested						Number of Questions	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
22	Organic chemistry							1	4.9
23	Soil chemistry							1	5.5
24	Pollution							1	4.7
25	Qualitative analysis							1	3.6
Total Number of Questions								27	
Total Percentage Weight									100

032/2 Actual Practical Table of Specification

S/N	Topics	Skills to be Tested						Number of Questions	Percentage Weight Per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Volumetric Analysis							1	50
2	Qualitative Analysis /Chemical Kinetics, Equilibrium and Energetics							1	50
Number of Questions								2	
Total Percentage Weight									100

032/2 Alternative to Practical Table of Specification

S/N	Topic	Skills to be Tested						Number of Questions	Percentage Weight per topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Laboratory techniques and safety							1	20
2	Volumetric analysis							1	20
3	Chemical kinetics, Equilibrium and Energetic/							1	20
4	Ionic theory and electrolysis							1	20
5	Qualitative analysis							1	20
Total Number of Questions								5	
Total Percentage Weight									100

033 BIOLOGY

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the format issued by the National Examinations Council of Tanzania (NECTA) in 2008. The format is based on the 2010 syllabus. The format emphasises on assessment that measures the higher order thinking skills. However, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination will generally assess the extent to which the candidate is able to:

- 2.1 evaluate the role, influence and importance of biological science in everyday life;
- 2.2 develop the capacity to improve and maintain their own health or families and the community;
- 2.3 develop mastery of fundamental concepts, principles and skills of biological science and related fields such as agriculture, medicine, pharmacy and veterinary;
- 2.4 develop necessary biological practical skills;
- 2.5 apply scientific skills and procedures in interpreting biological data;
- 2.6 acquire basic knowledge and apply appropriate skills in combating problems related to HIV/AIDS/STIs, gender, population, environment, drug/substance abuse, sexual and reproductive health; and
- 2.7 develop the ability and desire for self-study, self-confidence and self-advancement in biological sciences and related fields.

3.0 GENERAL COMPETENCES

The examination will test the candidates' ability to:

- 3.1 make appropriate use of biological knowledge, concepts, skills and principles in solving various problems in daily life;
- 3.2 record, analyse and interpret data from scientific investigations using appropriate methods and technology to generate relevant information in biological science;

- 3.3 use knowledge and skills in combating health related problems such as HIV/AIDS/STIs, gender, population, environment, drug and drug abuse, sexual and reproductive health; and
- 3.4 use relevant information on biological science and related fields for self- study and lifelong-learning.

4.0 EXAMINATION RUBRIC

The examination will consist of two papers. Paper 1 (033/1 Biology 1 Theory Paper) and Paper 2 (033/2 Biology 2 Practical Paper).

4.1 033/1 Biology 1

This will be a theory paper of **three (3)** hours. It will comprise sections A, B, and C with a total of **15** questions. Candidates will be required to answer a total of **14** questions which will weigh **100** marks.

Section A will consist of **2** questions. One question will consist of **10** multiple choice items carrying **one (1)** mark each. Another question will consist of **five (5)** matching items carrying **one (1)** mark each. Candidates will be required to answer both questions. This section will weigh a total of **15** marks.

Section B will consist of **10** short answer questions each carrying **6** marks. Candidates will be required to answer **all** the questions. This section will weigh a total of **60** marks.

Section C will consist of **three (3)** essay questions. Candidates will be required to answer **two (2)** questions of which one will be compulsory. The compulsory question will carry **15** marks and the other question will carry **10** marks, making a total of **25** marks in this section.

4.2 033/2 Biology 2

This paper will either be the actual practical or the alternative to the practical. Three equivalent alternatives of the actual practical papers (033/2A Biology 2A, 033/2B Biology 2B and 033/2C Biology 2C)

will be set. Only one alternative to the practical (033/2 Biology 2) will be set. Candidates will be required to sit for either actual practical or alternative to practical papers.

The actual practical paper will be for $2\frac{1}{2}$ hours. The paper will consist of **two (2)** questions and candidates will be required to answer **all** the questions. Question 1 will be from either Nutrition, Gaseous Exchange and Respiration, Transport of Materials in Living Things, Movement, Reproduction, Co-ordination or Growth topics. Question 2 will be from the topic of Classification of Living Things. Each question will carry **25** marks making a total of **50** marks in this paper.

The alternative to practical paper will be for $2\frac{1}{2}$ hours. The paper will consist of **five (5)** questions. Candidates will be required to answer **all** the questions. Each question will carry **10** marks, making a total of **50** marks in this paper. The questions will be taken from any of the topics listed in the examination content sub-section 5.3.

Note

- (i) The actual practical paper will have more than one alternative paper, which will be sent to schools depending on the number of candidates. Alternative A will be sent to schools with up to **100** candidates, alternatives A and B to schools with candidates not exceeding 200 and alternatives A, B and C to schools with more than 200 candidates.
- (ii) A checklist of biology laboratory specimens, chemicals, apparatuses, equipment and materials required for the examination will be sent to schools not less than three months before the date of sitting for this paper. However, the **24 hours advance instructions** will be sent in advance to be opened 24 hours prior to the beginning of the examination for making necessary laboratory arrangements.

5.0 EXAMINATION CONTENT

5.1 033/1 Biology 1

- 5.1.1 Introduction to biology
- 5.1.2 Safety in our environment
- 5.1.3 Health and immunity
- 5.1.4 Cell structure and organisation
- 5.1.5 Classification of living things
- 5.1.6 Nutrition
- 5.1.7 Balance of nature
- 5.1.8 Transport of materials in living things
- 5.1.9 Gaseous exchange and respiration
- 5.1.10 Movement
- 5.1.11 Co-ordination
- 5.1.12 Excretion
- 5.1.13 Regulation
- 5.1.14 Reproduction
- 5.1.15 Growth
- 5.1.16 Genetics
- 5.1.17 Evolution
- 5.1.18 Human Immunodeficiency Virus (HIV), Acquired Immune Deficiency Syndrome (AIDS) and Sexually Transmitted Infections (STIs).

5.2 032/2 Biology 2 (Actual Practical)

- 5.2.1 Nutrition
- 5.2.2 Gaseous exchange and respiration
- 5.2.3 Transport of materials in living things
- 5.2.4 Movement
- 5.2.5 Reproduction
- 5.2.6 Co-ordination
- 5.2.7 Growth
- 5.2.8 Classification of living things

5.3 033/2 Biology 2 (Alternative to Practical)

- 5.3.1 Nutrition
- 5.3.2 Gaseous exchange and respiration
- 5.3.3 Transport of materials in living things

- 5.3.4 Movement
- 5.3.5 Reproduction
- 5.3.6 Co-ordination
- 5.3.7 Growth
- 5.3.8 Classification of living things

033 Biology 1 Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight Per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Introduction to biology							1.99	8.3
2	Safety in our environment							1.77	7.4
3	Health and immunity							2.3	9.6
4	Cell structure and organisation							0.4	1.7
5	Classification of living things							3.1	12.5
6	Nutrition							1.5	6.2
7	Balance of nature							0.4	1.7
8	Transport of materials in living things							1.5	6.2
9	Gaseous exchange and respiration							0.8	3.5
10	Movement							0.8	3.5
11	Co-ordination							2.5	8.3
12	Excretion							0.8	3.5
13	Regulation							0.8	3.5
14	Reproduction							1.99	8.3
15	Growth							1.1	4.7
16	Genetics							1.77	7.4
17	Evolution							0.6	2.4
18	Human Immunodeficiency							0.3	1.3

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight Per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
	Virus (HIV), Acquired Immune Deficiency Syndrome (AIDS) and Sexually Transmitted Infections (STIs).								
Total Number of Items								24	
Total Percentage Weight									100

033/2 Biology 2 (Actual Practical) Table of Specification

S/N	Topics	Skills to be Tested						Number of Questions	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Classification of living things							1	50
2	(i) Nutrition (ii) Gaseous exchange and respiration (iii) Transport of materials in living things (iv) Movement (v) Reproduction (vi) Co-ordination (vii) Growth							1	50
Total Number of Questions								2	
Total Percentage Weight									100

033/2 Biology 2 (Alternative to Practical) Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Questions	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Classification of living things							1	20
2	Nutrition							1	20
3	(i) Transport of materials in living things (ii) Gaseous exchange and respiration							1	20
4	(i) Co-ordination (ii) Movement							1	20
5	(i) Reproduction (ii) Growth							1	20
Total Number of Questions								5	
Total Percentage Weight									100

034 AGRICULTURAL SCIENCE

(For Both School and Private Candidates)

1.0 INTRODUCTION

The revised Agricultural Science format is based on the 1997 syllabus and replaces the 2008 format. In this format, emphasis is on competence-based questions which assess the creativity and critical thinking of candidates in managing different challenges in the Agriculture field.

2.0 GENERAL OBJECTIVES

The Agricultural Science Examination aims to test the candidates for the following:

- 2.1 knowledge and understanding of basic concepts and principles used in farming business;
- 2.2 ability to use modern scientific and technological skills required in crop and livestock farming business;
- 2.3 ability to show the inter-relationships among the various disciplines of Agriculture required in any agricultural production venture; and
- 2.4 ability to apply scientific skills in carrying out investigations/experiments.

3.0 GENERAL COMPETENCES

The Agricultural Science Examination will test the candidates' ability to:

- 3.1 apply concepts, principles and theories of Agricultural Science in daily life;
- 3.2 analyse and interpret facts and ideas related to Agriculture;
- 3.3 demonstrate application of modern scientific and technological skills required in crop and livestock farming;
- 3.4 make appropriate use of agricultural processes in adding value to farm products;
- 3.5 demonstrate inter-dependence between agricultural and industrial development;
- 3.6 demonstrate the application of knowledge, concepts and principles to explain intelligently the observations and offer solution to problems related to Agriculture; and
- 3.7 conserve the environment while carrying out agricultural activities.

4.0 EXAMINATION RUBRIC

The Agricultural Science examination will comprise two papers: 034/1 Agricultural Science 1, a theory paper and 034/2 Agricultural Science 2, a practical paper.

4.1 034/1 Agricultural Science 1

This will be a theory paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **11** questions. Candidates will be required to answer a total of **10** questions. The total weight for this paper will be **100** marks.

Section A will consist of **two (2)** objective questions. One question will be a multiple choice question with **10** items. Each item will carry **one (1)** mark. Another question will consist of **five (5)** matching items. Each item will carry **one (1)** mark. Candidates will be required to answer **all** the questions. Therefore, this section will carry a total of **15** marks.

Section B will consist of **seven (7)** short answer/structured questions. Each question will carry **10** marks, hence a total of **70** marks in this section.

Section C will comprise **two (2)** essay questions. Candidates will be required to answer **one (1)** question. Each question will carry **15** marks.

4.2 034/2 Agricultural Science 2

This will be a practical paper of **2½** hours. The paper will consist of two questions, each carrying **25** marks. Candidates will be required to answer **all** the questions. The total weight for this paper will be **50** marks.

Note

- (i) A checklist of apparatuses, chemicals and specimens required for the examination will be sent to school not less than three months before the date of the sitting for the actual practical paper. However, there will be **24 Hours Advance Instructions** which

will be opened 24 hours for laboratory arrangements before the time of beginning the examination.

- (ii) The use of non-programmable calculator will be allowed in the examination room.

5.0 EXAMINATION CONTENT

5.1 034/1 Agricultural Science 1

5.1.1 Fundamentals of Agriculture

- 5.1.1.1 Agriculture as a science
- 5.1.1.2 Scientific procedures in agricultural science
- 5.1.1.3 The agricultural science laboratory
- 5.1.1.4 Contribution and role of agriculture to the economy of Tanzania
- 5.1.1.5 Agricultural development in Tanzania
- 5.1.1.6 Tanzania ecological zones related to agricultural production

5.1.2 Agricultural Mechanics

- 5.1.2.1 The concept of agricultural mechanics
- 5.1.2.2 The farm workshop
- 5.1.2.3 Farm power and machinery
- 5.1.2.4 Agricultural mechanisation
- 5.1.2.5 Farm surveying and mapping
- 5.1.2.6 Soil and water conservation

5.1.3 Crop Production

- 5.1.3.1 Introduction to crop science and production
- 5.1.3.2 Classification of crop plants grown in Tanzania
- 5.1.3.3 Distribution of major crop plants of economic importance in Tanzania
- 5.1.3.4 Factors affecting crop production in Tanzania
- 5.1.3.5 Farming systems
- 5.1.3.6 Cropping systems and planting patterns
- 5.1.3.7 Principles of crop production
- 5.1.3.8 Crop protection
- 5.1.3.9 Horticultural Production

- 5.1.3.10 Handling and processing of crop products
- 5.1.3.11 Crop storage structures
- 5.1.3.12 Annual field crops production
- 5.1.3.13 Forest crops production
- 5.1.3.14 Perennial field crops production

5.1.4 Livestock Production

- 5.1.4.1 Introduction to livestock science and production
- 5.1.4.2 Factors affecting livestock production in Tanzania
- 5.1.4.3 Livestock farming systems in Tanzania
- 5.1.4.4 Principles of livestock production
- 5.1.4.5 Poultry Farming
- 5.1.4.6 Livestock feeds and feeding
- 5.1.4.7 Pig farming
- 5.1.4.8 Goat farming
- 5.1.4.9 Sheep farming
- 5.1.4.10 Dairy cattle farming
- 5.1.4.11 Improvements of livestock breeds
- 5.1.4.12 Fisheries and fish production

5.1.5 Farming Business Economics and Agricultural Extension

- 5.1.5.1 The concept of farming business economics
- 5.1.5.2 Agricultural economics
- 5.1.5.3 Price and its determinants
- 5.1.5.4 Factors of production
- 5.1.5.5 Farm records and accounts
- 5.1.5.6 Risks and uncertainty in farming business
- 5.1.5.7 Specialisation and diversification in production
- 5.1.5.8 Agricultural marketing
- 5.1.5.9 Agricultural extension

5.1.6 Soil and its Agricultural Utilisation

- 5.1.6.1 The concept of Soil
- 5.1.6.2 Soil constituents
- 5.1.6.3 Weathering and soil formation
- 5.1.6.4 Physical properties of soil

- 5.1.6.5 Types of soils found in Tanzania
- 5.1.6.6 Soil plant nutrients
- 5.1.6.7 Soil fertility and productivity
- 5.1.6.8 Methods of improving soil fertility and productivity
- 5.1.6.9 Soil reaction

5.1.7 Agriculture and Environmental Management

- 5.1.7.1 Environmental degradation
- 5.1.7.2 Environmental pollution

5.2 034/2 Agricultural Science 2

- 5.2.1 Agricultural mechanics
- 5.2.2 Crop production
- 5.2.3 Livestock production
- 5.2.4 Soil and its agricultural utilization
- 5.2.5 Fundamentals of agriculture

034/1 Agricultural Science 1 Table of Specification

S/N	Themes	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Fundamentals of agriculture							2	10
2	Agricultural mechanics							2	10
3	Crop production							5	25
4	Livestock Production							4	20
5	Farming business economics and agricultural extension							3	15
6	Soil and its agricultural utilization							3	15
7	Agriculture and environmental management							1	5
Total Number of Items								20	
Total Percentage Weight									100

**034/2 Agricultural Science 2 Laboratory Practical Examination
Table of Specification**

S/N	Themes	Cognitive Levels to be Tested						Number of Questions	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Agricultural Mechanics							2	100
2	Crop Production								
3	Livestock Production								
4	Soil and its Agricultural Utilisation								
Total Number of Questions								2	
Total Percentage Weight									100

035 ENGINEERING SCIENCE

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Engineering Science syllabus for Ordinary Level of Secondary Education. It emphasises on the competence-based assessment approach. Despite the adjustments made in this format there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination will test the candidates' ability to:

- 2.1 apply scientific concepts in solving engineering problems;
- 2.2 explain the basic working principles of machines; and
- 2.3 explain the role of engineering science in engineering design.

3.0 GENERAL COMPETENCES

The examination will test the candidates' ability to:

- 3.1 use laboratory apparatus and interpret the use of units related to science;
- 3.2 apply laws governing scientific principles in constructing diagrams related to motion, simple machines, electricity and magnetism;
- 3.3 apply laws governing scientific principles in performing related calculations;
- 3.4 demonstrate and explain the use and advantages of levers; and
- 3.5 describe and demonstrate the construction and use of simple machines.

4.0 EXAMINATION RUBRIC

There will be one examination paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will be required to answer a total of **13** questions which will weigh **100** marks.

Section A will comprise **one (1)** question consisting of **ten (10)** multiple-choice items. Each item will weigh **one (1)** mark, making a total of **10**

marks in this section. Candidates will be required to answer **all** the questions.

Section B will comprise **nine (9)** short-answer questions, each weighing **five (5)** marks. Candidates will be required to answer **all** the questions. Hence the section will weigh a total of **45** marks.

Section C will comprise **four (4)** structured questions. Candidates will be required to answer **three (3)** questions. Each question will weigh **15** marks, making a total of **45** marks in this section.

5.0 EXAMINATION CONTENT

The examination will be set from the following topics:

- 5.1 Unit and Measurements
- 5.2 Forces
- 5.3 Friction
- 5.4 Turning forces
- 5.5 Energy, work and power
- 5.6 Simple machines
- 5.7 Fluid mechanics
- 5.8 Linear motion
- 5.9 Angular motion
- 5.10 Periodic motion
- 5.11 Projectile motion
- 5.12 Heat
- 5.13 Strength of materials
- 5.14 Optics (Light)
- 5.15 Sound
- 5.16 Electricity and magnetism

035 Engineering Science Table of Specification

S/N	Topic	Skills to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Unit and measurements							1	4.4
2	Forces							1	5.9
3	Friction							1	4.4
4	Turning forces							1	4
5	Energy, work and power							2	7
6	Simple machines							2	9
7	Fluid mechanics							2	7
8	Linear motion							1	6
9	Angular motion							1	6
10	Periodic motion							1	4
11	Projectile motion							1	4
12	Heat							2	7
13	Strength of materials							2	6
14	Optics (Light)							2	9
15	Sound							1	3
16	Electricity and magnetism							2	10
Total Number of Items								23	
Total Percentage Weight									100

036 INFORMATION AND COMPUTER STUDIES

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 2005 Computer Studies syllabus for Ordinary Level of Secondary Education. In this format, the emphasis is on using the competence-based assessment approach also aimed to test the candidates' creativity and critical thinking skills. However, there are no changes in the examination content.

2.0 GENERAL OBJECTIVES

The examination will assess the extent to which the candidates are able to:

- 2.1 demonstrate skills of data processing and interpretation of information;
- 2.2 develop awareness of information technology in the society;
- 2.3 apply information technology knowledge and skills in daily life;
- 2.4 develop practical skills in the use of computers;
- 2.5 analyse the role of information technology in socio-economic and cultural development of the society; and
- 2.6 apply the knowledge of computer networks to access information and security issues in a networked environment.

3.0 GENERAL COMPETENCES

The examination will assess the candidates' ability to;

- 3.1 organise and present information in a variety of forms;
- 3.2 identify the types and parts of computer and their uses;
- 3.3 use information and communication technology in data and information processing;
- 3.4 create relevant documents and publications using application software packages;
- 3.5 interpret various forms of information;
- 3.6 apply principles, knowledge and skills of information technology in daily life;
- 3.7 keep up-to-date with current developments and issues related to everyday use of the computer; and
- 3.8 use different types of networks to access information.

4.0 EXAMINATION RUBRIC

There will be **two (2)** examination papers of **three (3)** hours each. 036/1 Information and Computer Studies 1 (Theory Paper) and 036/2 Information and Computer Studies 2 (Practical Paper).

4.1 036/1 Information and Computer Studies 1

This will be a theory paper which will consist of sections A, B and C with a total of **12** questions. Candidates will be required to answer a total of **11** questions weighing **100** marks.

Section A will consist of two questions. One question will be a multiple-choice question with **10** items weighing **one (1)** mark each. The other question will be a matching items question with **five (5)** items, weighing **one (1)** mark each. Candidates will be required to answer all the questions. The section will weigh a total of **15** marks.

Section B will consist of **eight (8)** short-answer questions. One question will comprise jumbled sentences weighing **five (5)** marks and the rest of the questions will consist of **10** marks each. Candidates will be required to answer **all** the questions. This section will weigh a total of **75** marks.

Section C will consist of **two (2)** essay questions. Each question will carry **10** marks. Candidates will be required to answer **one (1)** question. The section will weigh a total of **10** marks.

4.2 036/2 Information and Computer Studies 2

This will be a practical paper consisting of **three (3)** questions. Each question will carry **25** marks. The candidate will be required to answer **two (2)** questions. The total marks for this paper will be **50**.

Note

- (a) Checklists of instruments and programs to be installed on the computers will be sent to schools not less than three months before the date of the examination. There will be **no 24-hour advance instructions** for this paper.

- (b) Candidates have to submit softcopies of their practical work to the National Examinations Council of Tanzania (NECTA) together with printouts attached their booklet covers as hard-copies. Softcopies should be saved on three (3) CDs using the candidates' Examination Numbers.

5.0 EXAMINATION CONTENT

The examination in both 036/1 Information and Computer Studies 1 and 036/2 Information and Computer Studies 2 will be set from the following topics:

5.1 036/1 Information and Computer Studies 1

- 5.1.1 Information
- 5.1.2 The computer
- 5.1.3 Computer software
- 5.1.4 Computer handling
- 5.1.5 Computer evolution
- 5.1.6 Word processing
- 5.1.7 Spreadsheet
- 5.1.8 Computer networks and communications
- 5.1.9 Internet
- 5.1.10 Impact of ICT in the society
- 5.1.11 Web development
- 5.1.12 Presentation
- 5.1.13 Database as information systems
- 5.1.14 Desktop publishing
- 5.1.15 Multimedia
- 5.1.16 Management of database information systems

5.2 036/2 Information and Computer Studies 2

- 5.2.2 Word processing
- 5.2.3 Spreadsheet
- 5.2.4 Web development
- 5.2.5 Presentation
- 5.2.6 Management of database information systems
- 5.2.7 Desktop publishing

036/1 Information and Computer Studies 1 Table of Specification

S/N	Topic	Cognitive Levels to be Tested						Number of Items	Percentage weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Information							1.3	5.3
2	The computer							1.6	6.5
3	Computer software							0.8	3.4
4	Computer handling							1	4.2
5	Computer evolution							0.4	1.5
6	Word processing							2	8
7	Spreadsheet							2.2	8.8
8	Computer networks and communications							0.6	2.3
9	Internet							1.3	5.3
10	Impact of ICT in the society							2.4	9.5
11	Web development							1.5	6.0
12	Presentation							3.2	12.6
13	Database as information systems							1.7	6.9
14	Desktop publishing							1.5	6.0

S/N	Topic	Cognitive Levels to be Tested						Number of Items	Percentage weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
15	Multimedia							2.4	9.5
16	Management of database information systems							1	4.2
Total Number of Items								25	
Total Percentage Weight									100

036/2 Information and Computer Studies 2 Table of Specification

S/N	Topic	Cognitive Levels to be Tested						Number of Questions	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Word processing							1	14.9
2	Spreadsheet								
3	Web development							1	17.8
4	Presentation								
5	Management of database information systems							1	17.3
6	Desktop publishing								
Total Number of Questions								3	
Total Percentage Weight									50

041 BASIC MATHEMATICS

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the format issued in 2008 by the National Examinations Council of Tanzania (NECTA). The revised format is based on the Mathematics Syllabus for Ordinary Secondary Education of 2005. The revisions made in this format aim to assess candidates on items that are more competence-based, especially in relation to applying higher order thinking skills.

2.0 GENERAL OBJECTIVES

The examination will test the extent to which candidates are able to:

- 2.1 solve practical mathematical problems in daily life;
- 2.2 apply mathematical concepts in interpreting situations; and
- 2.3 use mathematical knowledge and techniques in studying mathematics and related subjects.

3.0 GENERAL COMPETENCES

The examination will test the candidates' ability to:

- 3.1 think critically and logically in interpreting and solving practical mathematical related problems;
- 3.2 use mathematical concepts to explain and clarify mathematical related problems; and
- 3.3 apply mathematical knowledge and techniques in other fields.

4.0 EXAMINATION RUBRIC

There will be **one (1)** paper of **three (3)** hours. The paper will consist of sections A and B with a total of **14** questions. Candidates will be required to answer **all** the questions which will weigh **100** marks.

Section A will consist of **ten (10)** short answer questions each carrying **six (6)** marks. Candidates will be required to answer **all** the questions. The section will weigh **60** marks.

Section B will consist of **four (4)** long answer questions, each carrying **ten (10)** marks. Candidates will be required to answer **all** questions. The section will weigh **40** marks.

Note:

In attempting this paper candidates will be allowed to use Mathematical tables published by the National Examinations Council of Tanzania.

5.0 EXAMINATION CONTENT

The examination will be set from the following topics:

- 5.1 Numbers
- 5.2 Fractions
- 5.3 Decimals
- 5.4 Percentages
- 5.5 Approximations
- 5.6 Exponents
- 5.7 Radicals
- 5.8 Logarithms
- 5.9 Algebra
- 5.10 Sets
- 5.11 Co-ordinate Geometry
- 5.12 Vectors
- 5.13 Geometry
- 5.14 Perimeter and areas
- 5.15 Congruence
- 5.16 Similarity
- 5.17 Units
- 5.18 Rates and variations
- 5.19 Ratio, profit and loss
- 5.20 Sequences and series
- 5.21 Trigonometry
- 5.22 Pythagoras Theorem
- 5.23 Quadratic equations
- 5.24 Linear programming

- 5.25 Statistics
- 5.26 Three dimensional figures
- 5.27 Circles
- 5.28 The earth as a sphere
- 5.29 Accounts
- 5.30 Matrices and transformations
- 5.31 Probability
- 5.32 Relations
- 5.33 Functions

041 Basic Mathematics Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Numbers/Fractions, Decimals and Percentage/ Approximations							1	7.14
2	Exponents/Radicals / Logarithms							1	7.14
3	Sets/Probability							1	7.14
4	Coordinate Geometry/Vectors							1	7.14
5	Geometry/Perimeters and Areas/Congruence and Similarity.							1	7.14
6	Units/Rates and Variation							1	7.14

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
7	Ratio, Profit and Loss/Accounts							1	7.14
8	Sequence and Series							1	7.14
9	Trigonometry and Pythagoras Theorem							1	7.14
10	Algebra /Quadratic equations							1	7.14
11	Statistics/Circles							1	7.14
12	Three dimensional figures/ the Earth as a sphere							1	7.14
13	Matrices and transformations							1	7.14
14	Linear Programming /Functions/Relations							1	7.14
Total Number of Items								14	
Total Percentage Weight									100

042 ADDITIONAL MATHEMATICS

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the format issued in 2008 by the National Examinations Council of Tanzania (NECTA). The format has been prepared to take into account the changes in the new syllabus of 2010. The new format emphasises more on competence-based items at the Certificate of Secondary Education Examination (CSEE) level.

2.0 GENERAL OBJECTIVES

The general objectives of the Additional Mathematics examination include to assess the extent to which the candidates are able to:

- 2.1 think logically and discover mathematical concepts;
- 2.2 demonstrate skills in solving practical problems; and
- 2.3 use mathematical knowledge and skills in other fields.

3.0 GENERAL COMPETENCES

The general competences assessed in Additional Mathematics examination include the candidates' ability to:

- 3.1 think critically and logically in interpreting and solving problems;
- 3.2 apply mathematical knowledge and techniques in other fields; and
- 3.3 apply language of mathematics in explaining and clarifying mathematical ideas.

4.0 EXAMINATION RUBRIC

There will be **one (1)** paper of **three (3)** hours. Candidates will be required to answer **all** the questions which weigh **100** marks. The paper will consist of sections A and B with a total of **14** questions.

Section A will consist of **10** short answer questions, each carrying **six (6)** marks. Candidates will be required to answer **all** questions. The section will weigh **60** marks.

Section B will consist of **four (4)** long structured answer questions, each carrying **10** marks. The section will weigh **40** marks.

5.0 EXAMINATION CONTENT

- 5.1 Numbers
- 5.2 Sets
- 5.3 Equations and remainder theorem
- 5.4 Functions
- 5.5 Algebra
- 5.6 Symmetry
- 5.7 Geometrical constructions
- 5.8 Variations
- 5.9 Differentiation
- 5.10 Integration
- 5.11 Trigonometry
- 5.12 Locus
- 5.13 Plan and elevations
- 5.14 Co-ordinate Geometry
- 5.15 Statistics
- 5.16 Logic
- 5.17 Permutations and combinations
- 5.18 Probability
- 5.19 Vectors
- 5.20 Matrices and linear transformations

042 Additional Mathematics Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Variations							1	7.14
2	Statistics							1	7.14
3	Co-ordinate Geometry							1	7.14
4	Locus							1	7.14
5	Algebra							1	7.14
6	Symmetry/Plan and Elevations/ Geometrical constructions							1	7.14
7	Trigonometry							1	7.14
8	Numbers							1	7.14
9	Logic							1	7.14
10	Sets							1	7.14
11	Functions/Equations and Remainder Theorem							1	7.14
12	Differentiation/Integration							1	7.14
13	Probability							1	7.14

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
14	Vectors/Matrices and Linear Transformations							1	7.14
Total Number of Items								14	
Total Percentage Weight per Skill									100

051 FOOD AND NUTRITION

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 issued by the National Examinations Council of Tanzania (NECTA). This format is based on the Home Economics Ordinary Level of Secondary Education syllabus of 1997. The major improvements in the examination questions aim to assess the candidates' competences in higher order thinking skills. Despite the changes made in the format, there are no changes in the examination content.

2.0 GENERAL OBJECTIVES

The examination intends to assess the extent to which the candidates are able to:

- 2.1 analyse matters concerning maternal and child care, family relationship and family life skills;
- 2.2 analyse the concept of environmental sanitation;
- 2.3 show the skill of kitchen planning and food hygiene;
- 2.4 categorise materials used at home, their use and care;
- 2.5 understand the concept of food and food nutrient, its importance in the body and effect of heat on various food nutrients;
- 2.6 recognise the nutritional needs in the context of selection, preparation, cooking and serving of food using various approaches;
- 2.7 demonstrate skills of food processes and preservation; and
- 2.8 recognise the skills of generating and managing income through catering activities.

3.0 GENERAL COMPETENCE

The examination will specifically test the candidates' ability to:

- 3.1 apply knowledge of family relationship and family life skills;
- 3.2 select and use available resources in maintaining environmental sanitation;
- 3.3 apply skills of kitchen planning and food hygiene to meet ergonomic and health aspects;
- 3.4 apply skill of choice, use and care of materials used at home;
- 3.5 apply knowledge of food and nutrition in planning and preparing family meals using various methods of cooking;
- 3.6 apply skills of food processing and preservation by considering versatility, desirability and social values;
- 3.7 plan, prepare, cook and serve balanced meals for the family; and
- 3.8 apply skills of managing catering activities.

4.0 EXAMINATION RUBRIC

There will be two examination papers which are 051/1 Food and Nutrition 1 (Theory Paper) and 051/2 Food and Nutrition 2 (Practical Paper).

4.1 051/1 Food and Nutrition 1

This will be a theory paper of **three (3)** hours and will consist of sections A, B and C with a total of **11** questions. Candidates will be required to answer a total of **10** questions which will weigh **100** marks.

Section A will consist of **two (2)** questions. One question will be a multiple choice question with **10** items and will weigh **10** marks. Another question will be a matching items question with **five (5)** items carrying **5** marks, hence a total of **fifteen (15)** marks in this section. Candidates will be required to answer **all** the questions.

Section B will consist of **seven (7)** short answer questions weighing **ten (10)** marks each. Candidates will be required to answer **all** questions. The section will weigh a total of **70** marks.

Section C will consist of **two (2)** essay questions. The candidates will be required to answer **one (1)** question. Each question will weigh **15** marks, making a total of **fifteen (15)** marks.

4.2 051/2 Food and Nutrition 2

This paper will be divided into two sessions: **a planning session** and **a practical session**. The paper will consist of **five (5)** practical questions. Candidates will be required to answer only **one (1)** question which will weigh **100** marks.

4.2.1 Planning session

This will be a **1½** hours open book examination. However, candidates will be allowed to use recipe books during the **planning session only**. Each candidate will select one question by secret ballot drawing. The candidate will read the question, write the choice of dishes, time plan (order of work) and shopping list. The candidates will have an opportunity to make a choice of dishes according to the requirement of the question.

4.2.2 Practical session

The practical session will be for **2½ hours**. In the practical session the candidate will be required to demonstrate what has been planned and he/she will be assessed based on the criteria provided in the following Table:

SN	Items	Marks
1	Choice of dishes	10
2	Order of work	05
3	Skill	35
4	Quality	30
5	Cleanliness	05
6	General impression	05
7	Serving and appearance	10
Total		100

5.0 EXAMINATION CONTENT

The examination will be set from the following topics:

5.1 051/1 Food and Nutrition 1

- 5.1.1 Good manners
- 5.1.2 Good grooming
- 5.1.3 Age courtship, marriage practices
- 5.1.4 The family
- 5.1.5 Child health
- 5.1.6 Laundering in the home
- 5.1.7 Disinfectant
- 5.1.8 Material used in the home
- 5.1.9 Cleaning agents
- 5.1.10 Sanitation
- 5.1.11 Cleaning a house
- 5.1.12 Floor and floor covering
- 5.1.13 The house compound
- 5.1.14 Kitchen planning
- 5.1.15 Kitchen and food hygiene
- 5.1.16 Nutritionally adequate meals
- 5.1.17 Money management
- 5.1.18 Water supply
- 5.1.19 Refuse
- 5.1.20 An ideal home
- 5.1.21 Public health services

- 5.1.22 The adolescent
- 5.1.23 Early marriage
- 5.1.24 The expectant mother
- 5.1.25 The coming baby
- 5.1.26 Baby clinic
- 5.1.27 Feeding the baby
- 5.1.28 Weaning a baby
- 5.1.29 Family planning
- 5.1.30 The toddler
- 5.1.31 Children ailment
- 5.1.32 Family roles and relationship
- 5.1.33 Accidents in the home
- 5.1.34 Cooking food
- 5.1.35 Food and nutrition
- 5.1.36 Malnutrition
- 5.1.37 Vegetables and fruits
- 5.1.38 Staple foods
- 5.1.39 Pastry
- 5.1.40 Raising agents
- 5.1.41 Bread
- 5.1.42 Cakes and biscuits
- 5.1.43 Milk and milk products
- 5.1.44 Eggs
- 5.1.45 Batter
- 5.1.46 Beverages
- 5.1.47 Meal planning
- 5.1.48 Appetizers
- 5.1.49 Meat
- 5.1.50 Fish
- 5.1.51 Packed meals
- 5.1.52 Cooking for different occasion
- 5.1.53 Reheated foods
- 5.1.54 Convenience foods
- 5.1.55 Food preservation
- 5.1.56 Food contamination
- 5.1.57 Catering

5.2 051/2 Food and Nutrition 2

- 5.2.1 Food and nutrition
- 5.2.2 Cooking foods
- 5.2.3 Malnutrition

- 5.2.4 The expectant
- 5.2.5 Feeding the baby
- 5.2.6 Weaning a baby
- 5.2.7 The toddler
- 5.2.8 Vegetables and fruits
- 5.2.9 Staple foods
- 5.2.10 Raising agents
- 5.2.11 Bread
- 5.2.12 Cakes and biscuits
- 5.2.13 Eggs
- 5.2.14 Butter
- 5.2.15 Beverages
- 5.2.16 Appetizers
- 5.2.17 Meal planning
- 5.2.18 Meat
- 5.2.19 Fish
- 5.2.20 Packed meals
- 5.2.21 Reheated foods
- 5.2.22 Convenience foods
- 5.2.23 Cooking for different occasion
- 5.2.24 Food preservation

051/1 Food and Nutrition 1 Table of Specification

SN	Topics	Skill to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Good manners and good grooming							1	5
2	Adolescence, age courtship, marriage practices and early marriage							1	5
3	The family, family roles and relationship and family planning							1	5
4	Baby clinic, child health & children ailments							1	5
5	Cleaning a house, cleaning agents & disinfectant, and laundering in the home							1	5
6	Public health services, water supply sanitation and refuse							1	5
7	Kitchen and food hygiene, accidents in the home and material used at home							1	5
8	An ideal home, the house compound, floor and floor covering							1	5
9	The expectant mother, the coming baby, breast-feeding and weaning a baby							1	5
10	Food and nutrition & malnutrition							2	10

SN	Topics	Skill to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
11	Vegetables, fruits, beverages and appetizers							1	5
12	Staple foods							1	5
13	Raising agents, bread, pastry, cakes and biscuits							1	5
14	Eggs, butter, milk and milk products							1	5
15	Cooking food, meal planning and cooking for different occasions packed meals, reheated foods and convenience food							2	10
16	Meat and fish							1	5
17	Food preservation and food contamination							1	5
18	Catering and economics in relation to catering, money management							1	5
Number of Items								20	
Total Percentage Weight									100

051/2 Food and Nutrition 2 Table of Specification

S/N	Topics	Remembering	Understanding	Applying	Analysing	Evaluating	Creating	Number of Questions	Percentage Weight per Topic
1	The expectant mother, weaning a baby, the toddler, food and nutrition, malnutrition and beverages							1	20
2	Cereals, flour and pastry and pulses and nuts, raising agents, bread, beverages, cakes and biscuits							1	20
3	Meat, fish, milk and milk products, batter, eggs, vegetables and fruits							1	20
4	Meal planning, cooking for different occasion, appetizers, vegetables and fruits							1	20
5	Reheated foods, packed meals, convenience foods, food preservation, vegetables and fruits							1	20
Number of Questions								5	
Total Percentage Weight									100

052 TEXTILES AND DRESSMAKING

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 issued by the National Examinations Council of Tanzania (NECTA). This format is based on the Home Economics Ordinary Level of Secondary Education syllabus of 1997. The improvements made aim to assess the candidates' competences in higher order thinking skills. Despite these improvements, there are no changes in the examination content.

2.0 GENERAL OBJECTIVES

The examination intends to assess the extent to which the candidates are able to:

- 2.1 recall knowledge of fabrics, fashion designs, sewing equipment and sewing processes;
- 2.2 demonstrate an understanding of the principle underlying the choice, use and care of sewing equipment and fabrics;
- 2.3 design, draft and use patterns and embroider different items;
- 2.4 sew and mend garments;
- 2.5 follow correct processes in making various garments; and
- 2.6 understand ways of generating and managing income through tailoring activities.

3.0 GENERAL COMPETENCE

The examination will specifically assess the candidates' ability to:

- 3.1 show an understanding of the principles underlying the choice, use and care of sewing machine and sewing tools;
- 3.2 care and use various types of fabrics;
- 3.3 apply skills of designing, drafting and using patterns in garment making;
- 3.4 apply knowledge of garment making processes suitable for making various types of material and garments;
- 3.5 embroider, sew and mend household articles and garments using correct stitches and procedures; and
- 3.6 recognise the skills of generating and managing income through tailoring activities.

4.0 EXAMINATION RUBRIC

There will be two examination papers which are 052/1 Textiles and Dressmaking 1 (Theory Paper) and 052/2 Textiles and Dressmaking 2 (Practical Paper).

4.1 052/1 Textiles and Dressmaking 1

This will be a theory paper of **three (3)** hours and will consist of sections A, B and C with a total of **11** questions. Candidates will be required to answer a total of **10** questions which will weigh **100** marks.

Section A will consist of **two (2)** questions. One question will be a multiple choice question with **10** items and will weigh a total of **10** marks. Another question will be a matching items question with **five (5)** items and will carry **five (5)** marks. Candidates will be required to answer **all** the questions. The total marks in this section will be **15** marks.

Section B will consist of **seven (7)** short-answer questions weighing **10** marks each. Candidates will be required to answer **all** the questions. The section will weigh a total of **70** marks.

Section C will consist of **two (2)** structured questions. Each question will weigh **15** marks. Candidates will be required to answer **one (1)** question. The section will weigh a total of **15** marks.

4.2 052/2 Textiles and Dressmaking 2

This paper will be a practical paper and will consist of two components which are the practical examination and a coursework.

4.2.1 Practical Examination

This paper will be for **three (3)** hours and will consist of **one (1)** question. The paper will weigh **75** marks.

Note

A **checklist** of sewing equipment, fabrics, fastenings and trimmings required for the examination will be sent to schools not less than three months before the date of sitting for this paper. In addition, there will be **24 hours advance instructions** which will be opened 24 hours before the beginning of the examination for sewing room arrangement.

4.2.2 Coursework

The coursework will require the candidate to make two articles which include:

- (a) A child garment or his/her garment, i.e. dress or blouse and skirt or a shirt and short/trouser.
- (b) An embroidered article.

The coursework articles will weigh a total of **25** marks as indicated in the following Table:

Distribution of Marks for the Coursework

S/N	Skills	Marks
1.	A child dress or Personal garment	2
	(a) Tidiness/Neatness	10
	(b) Details on the wrong side	7
	(c) Details on the right side	
2.	Embroidered article	6
Total		25

The articles should be displayed and marked during the Food and Nutrition practical examination.

5.0 EXAMINATION CONTENT

The examination will be set from the following topics:

5.1 052/1 Textiles and Dressmaking 1

- 5.1.1 The sewing room
- 5.1.2 The sewing machine
- 5.1.3 Basic sewing stitches
- 5.1.4 Making an apron
- 5.1.5 Undergarments
- 5.1.6 Mending
- 5.1.7 Dressmaking processes, i.e. seams, disposal of fullness sleeves, collars, edge finishing, openings, fastenings and pockets.
- 5.1.8 Pattern drafting and pattern markings
- 5.1.9 Estimation of material for making garments
- 5.1.10 Laying and cutting out garments
- 5.1.11 Making the garments
- 5.1.12 Fabrics

- 5.1.13 Children's clothing
- 5.1.14 Embroidery
- 5.1.15 Style, colour and line in garment making
- 5.1.16 Soft home furnishing
- 5.1.17 Economics in textiles and dressmaking

5.2 052/2 Textiles and Dressmaking 2

- 5.2.1 Basic sewing stitches
- 5.2.2 Undergarments
- 5.2.3 Dressmaking processes, i.e. seams, sleeves, collars, edge finishing, openings, disposal of fullness, fastenings and pockets.
- 5.2.4 Laying and cutting out garments
- 5.2.5 Making the garments
- 5.2.6 Children's clothing

052/1 Textiles and Dressmaking 1 Table of Specification

SN	Topics	Skill to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Features of a sewing room & sewing equipment							1	3
2	The sewing machine							1	5
3	Basic sewing stitches							1	6
4	Undergarments							1	3
5	Mending							1	6
6	Seams							1	7
7	Disposal of fullness							2	9
8	Collar sleeve and edge finishing							1	6
9	Openings, fastenings							2	9
10	Pockets							1	3
11	Pattern drafting							1	6
12	Garment making and making an apron							1	6
13	Fabrics							2	12
14	Children's clothing							1	6
15	Embroidery & soft-home furnishing							1	3
16	Style, colour and line in garment making							1	4
17	Economics in textiles and dressmaking							1	6
Total Number of Items								20	
Total Percentage Weight									100

052/2 Textiles and Dressmaking 2 Table of Specification

SN	Topics	Skill to be Tested						Number of Questions	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Garment Making (Dress Making Processes i.e. Laying and Cutting Out, Seams, Disposal of Fullness, Collars, Sleeve, Openings, Fastenings, Edge Finishing, Pockets)							1	75
Total Number of Questions								1	
Total Percentage Weight									75

061 COMMERCE

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 issued by the National Examination Council of Tanzania (NECTA). This format is based on the Commerce Syllabus for Ordinary Secondary Education of 2016. The revised format emphasises on measuring the students' competences especially in higher order thinking skills.

2.0 GENERAL OBJECTIVES

The examination will assess the extent to which the candidates can:

- 2.1 use personal social values and skills in dealing with commercial issues;
- 2.2 interpret commercial issues using government and non-government policies;
- 2.3 describe the role of various organisations in commerce;
- 2.4 use entrepreneurial skills in dealing with commercial issues; and
- 2.5 apply basic leadership, managerial skills and principles while working with others to accomplish business goals.

3.0 GENERAL COMPETENCES

The examination will test the candidates' ability to demonstrate their competences on:

- 3.1 the use of entrepreneurial skills in day to day life;
- 3.2 how to provide supportive arguments during trading and dialogue;
- 3.3 how to negotiate in business transactions;
- 3.4 financial literate and management risks; and
- 3.5 the economic role played by commerce in day-to-day activities.

4.0 EXAMINATION RUBRIC

There will be one paper of **three (3)** hours. The paper will consists of three sections of A, B and C with a total of **ten (10)** questions. The candidates will be required to answer a total of **nine (9)** questions which will weigh **100** marks.

Section A will consist of **two (2)** questions. Question 1 will comprise 15 multiple choice items. Each item will weigh **one (1)** mark, making a total of **15** marks. Question 2 will consist of **five (5)** matching items. Each item will carry **one (1)** mark, hence a total of **five (5)** marks. Candidates will be required to answer all the questions. Therefore section A will carry a total of **20** marks.

Section B will consist of **five (5)** short-answer questions each weighing **10** marks. The candidates will be required to answer **all** the questions. This section will carry a total of **50** marks.

Section C will consist of **three (3)** essay questions. The candidates will be required to answer **two (2)** questions. Each question will weigh **15** marks, making a total of **30** marks.

5.0 EXAMINATION CONTENT

- 5.1 Commerce Basics
- 5.2 Production
- 5.3 Entrepreneurship
- 5.4 Domestic Trade
- 5.5 Warehousing Management
- 5.6 Economics Basics
- 5.7 Transportation
- 5.8 Business Communication
- 5.9 Marketing
- 5.10 Finance
- 5.11 International Trade
- 5.12 Taxation
- 5.13 Insurance
- 5.14 Business Units
- 5.15 Business Management

061 Commerce Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Commerce Basics							1.4	5.8
2	Production							2.1	8.9
3	Entrepreneurship							4.4	18.5
4	Domestic Trade							1.8	7.7
5	Warehousing Management							1.6	6.5
6	Economic Basics							1.2	4.8
7	Transportation							1.3	5.6
8	Business communication							0.9	3.6
9	Marketing							1.7	6.8
10	Finance							1.2	5
11	International Trade							1.2	5.2
12	Taxation							1.9	7.9
13	Insurance							1.6	6.5
14	Business Units							0.9	3.6
15	Business Management							0.9	3.6
Total Number of Items								24	
Total Percentage Weight									100

062 BOOK-KEEPING

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the format issued by the National Examinations Council of Tanzania (NECTA) in 2008. The format is based on the Book-keeping Syllabus for Ordinary Secondary Schools of 2016. The revised examination format emphasises on measuring the candidates' competences, especially in higher order thinking skills.

2.0 GENERAL OBJECTIVES

The examination will assess the extent to which the candidates can:

- 2.1 distinguish various Book-keeping systems concerning financial matters and records;
- 2.2 prepare and maintain accounting records of various business organisations;
- 2.3 apply the business concepts and principles in business activities;
- 2.4 use figures in business communications, analysis and decision-making;
- 2.5 apply problem-solving and computational skills in business activities;
- 2.6 demonstrate awareness and recognition of the consequences of accounting errors;
- 2.7 appreciate and use financial statements as a means of business communication; and
- 2.8 ascertain the results of business operations and financial position for a given period of time.

3.0 GENERAL COMPETENCES

The examination will assess the candidates' ability to:

- 3.1 manage financial affairs in a responsible and effective manner in their lives, community and economic development;
- 3.2 perform business calculations;
- 3.3 apply the accounting concepts and principles in business activities;
- 3.4 use appropriate technology when dealing with financial matters;
- 3.5 demonstrate integrity and ethics in dealing with financial matters;

- 3.6 present financial information effectively by using Generally Accepted Accounting Principles (GAAPs);
- 3.7 prepare accounting records of various business organisations;
- 3.8 demonstrate an understanding of business concept and principles;
- 3.9 demonstrate awareness and recognition of the consequences of accounting errors;
- 3.10 use figures in business communications, analysis and decision-making; and
- 3.11 distinguish various Book-keeping systems concerning financial matters and records.

4.0 EXAMINATION RUBRIC

There will be one paper of three **(3)** hours. The paper will consist of sections A, B and C with a total of nine **(9)** questions. Candidates will be required to answer a total of **eight (8)** questions which will weigh **100** marks.

Section A will consist of **two (2)** questions of which one question will comprise **15** multiple choice items. The second question will comprise **five (5)** matching items. Question **one (1)** will carry **15** marks and question **two (2)** will carry **five (5)** marks, making a total of **twenty (20)** marks. Candidates will be required to answer all questions.

Section B will consist of **four (4)** short answer questions of which **two (2)** questions will require candidates to provide brief explanations and the other **two (2)** will be on recording of financial transactions/business calculations. The candidates will be required to answer **all** the questions. Each question will carry **ten (10)** marks, making a total of **forty (40)** marks.

Section C will consist of **three (3)** questions on problem-solving/manipulations or recording of financial transactions. The candidates will be required to answer **two (2)** questions. Each question will carry **20** marks, making a total of **40** marks.

5.0 EXAMINATION CONTENT

- 5.1 Introduction to book-keeping
- 5.2 Books of prime entry
- 5.3 Principle of Double Entry
- 5.4 Trial balance
- 5.5 Elementary financial statements
- 5.6 Columnar cash books
- 5.7 Bank reconciliation statements
- 5.8 Government accounting and budgeting
- 5.9 Correction of book-keeping errors
- 5.10 Adjustments
- 5.11 Control Accounts
- 5.12 Accounting for single entry and incomplete records
- 5.13 Accounts of non-profit making organisations
- 5.14 Accounts for manufacturing firms
- 5.15 Consignments
- 5.16 Accounting for joint businesses
- 5.17 Accounting for department stores
- 5.18 Elements of auditing.

062 Book-Keeping Table of Specification

S/N	Topics	Cognitive Level to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Introduction to book-keeping							0.7	3
2	Books of prime entry							1.4	6
3	Principle of Double Entry							1.4	6
4	Trial balance							0.9	4
5	Elementary financial statements							1.4	6
6	Columnar cash books							1.8	8
7	Bank reconciliation statements							1.4	6
8	Government accounting and budgeting							0.7	3
9	Correction of book-keeping errors							1.6	7
10	Adjustments							2.5	11
11	Control accounts							0.9	4
12	Accounting for single entry and incomplete records							0.7	3
13	Accounts of non-profit making organisations							1.8	8
14	Accounts for manufacturing firms							1.4	6
15	Consignments							0.9	4
16	Accounting for joint businesses							1.6	7
17	Accounting for department stores							1.2	5
18	Elements of auditing							0.7	3
Total Number of Items								23	
Total Percentage Weight									100

071 BUILDING CONSTRUCTION

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Building Construction syllabus for Ordinary Level of Secondary Education. It emphasises on the competence-based assessment approach. Despite the amendments made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination intends to assess the extent to which the candidates can:

- 2.1 apply theories and principles in the construction of buildings up to a single storey;
- 2.2 use the construction materials for the construction of domestic buildings up to a single storey; and
- 2.3 apply simple theories of computation to prepare cost estimates for various building materials.

3.0 GENERAL COMPETENCES

The examination will test candidates' ability to:

- 3.1 use basic construction principles in the erection of domestic buildings up to a single storey;
- 3.2 maintain the required quality of constructed building up to a single storey;
- 3.3 identify and select suitable construction materials for the construction of domestic buildings up to a single storey; and
- 3.4 apply skills acquired to prepare cost estimates for various building materials.

4.0 EXAMINATION RUBRIC

There will be **one (1)** examination paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will be required to answer a total of **13** questions which will weigh **100** marks.

Section A will comprise **two (2)** questions. One question will consist of **ten (10)** multiple-choice items and another one will consist of **five (5)** matching items. Each item in both multiple-choice question and matching items will

consist of **one (1)** mark, making a total of **15** marks in this section. Candidates will be required to answer **all** the questions.

Section B will comprise **eight (8)** short answer questions, each weighing **five (5)** marks, making a total of **40** marks in this section. Candidates will be required to answer **all** the questions.

Section C will comprise **four (4)** structured questions. Candidates will be required to answer **three (3)** questions. Each question will weigh **15** marks, making a total of **45** marks in this section.

5.0 EXAMINATION CONTENT

The examination will be set from the following topics:

- 5.1 Introduction to building construction
- 5.2 Construction materials
- 5.3 Site preparation
- 5.4 Foundation
- 5.5 Scaffolding and shoring
- 5.6 Walls
- 5.7 Columns and beams
- 5.8 Floors
- 5.9 Roofs
- 5.10 Doors
- 5.11 Windows
- 5.12 Ironmongery
- 5.13 Stairs
- 5.14 Fireplaces, flues and chimneys
- 5.15 Water supply
- 5.16 Drainage

071 Building Construction Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Introduction to building construction							1	4.35
2	Construction materials							3	13.04
3	Site preparation							1	4.35
4	Foundation							2	8.70
5	Scaffolding and shoring							1	4.35
6	Walls							1	4.35
7	Columns and beams							1	4.35
8	Floors							2	8.70
9	Roofs							2	8.70
10	Doors							2	8.70
11	Windows							2	8.70
12	Ironmongery							1	4.35
13	Stairs							1	4.35
14	Fireplaces, flues and chimneys							1	4.35
15	Water supply							1	4.35
16	Drainage							1	4.35
Total Number of Items								23	
Total Percentage Weight									100

072 ARCHITECTURAL DRAUGHTING

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Architectural Draughting syllabus for Ordinary Level of Secondary Education. It emphasises on the competence-based assessment approach. Despite the amendments, made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination intends to assess the extent to which the candidates can:

- 2.1 use theories and principles in the preparation, interpretation and use of architectural drawings for Civil Engineering works;
- 2.2 use theories and principles of properties of the lines; and
- 2.3 arrange the groups of building accessories.

3.0 GENERAL COMPETENCES

The examination will assess the candidates' ability to:

- 3.1 identify and interpret drawings for civil engineering works;
- 3.2 prepare drawings of objects and architectural structures from the information provided, which includes sketches or designs;
- 3.3 prepare building schedules (e.g. doors, windows, finishes) and specifications; and
- 3.4 demonstrate skills on how to reproduce architectural drawings.

4.0 THE EXAMINATION RUBRIC

There will be **one (1)** examination paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **13** questions. Candidates will be required to answer a total of **12** questions which will weigh **100** marks.

Section A will comprise **one (1)** question consisting **ten (10)** multiple-choice items weighing **one (1)** mark, making a total of **10** marks in this section. Candidates will be required to answer **all** the questions.

Section B will comprise **ten (10)** short answer questions, each weighing **six (6)** marks, making a total of **60** marks in this section. Candidates will be required to answer **all** the questions.

Section C will comprise **two (2)** structured questions. The candidates will be required to answer **one (1)** question. The question will weigh **30** marks. Therefore, the section will weigh **30** marks.

5.0 EXAMINATION CONTENT

The candidates will be tested on the following topics:

- 5.1 Introduction to building architecture
- 5.2 Drawing instruments and equipment
- 5.3 Architectural lettering
- 5.4 Architectural scales
- 5.5 Site plan
- 5.6 Residential house planning
- 5.7 Development of floor plans
- 5.8 Foundation plans
- 5.9 Sections
- 5.10 Elevations
- 5.11 Roofs
- 5.12 Doors
- 5.13 Windows
- 5.14 Stairs and staircases
- 5.15 Fireplaces and flues
- 5.16 Water supply
- 5.17 Drainage system
- 5.18 Electrical supply
- 5.19 Perspective drawings
- 5.20 Schedules
- 5.21 Building specifications
- 5.22 Reproduction and storage of drawings

072 Architectural Draughting Table of Specification

S/N	Topic	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Introduction to building architecture							1	4.55
2	Special drawing instruments and equipment							1	4.55
3	Architectural lettering							1	4.55
4	Architectural scales							1	4.55
5	Site plan							1	4.55
6	Residential house planning							1	4.55
7	Development of floor plans							1	4.55
8	Foundation plans							1	4.55
9	Sections							1	4.55
10	Elevations							1	4.55
11	Roofs							1	4.55
12	Doors							1	4.55
13	Windows							1	4.55
14	Stairs and staircases							1	4.55
15	Fireplaces and flues							1	4.55
16	Water supply							1	4.55
17	Drainage system							1	4.55
18	Electrical supply							1	4.55
19	Perspective drawings							1	4.55
20	Schedules							1	4.55

S/N	Topic	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
21	Building specifications							1	4.55
22	Reproduction and storage of drawings							1	4.55
Total Number of Items								22	
Total Percentage Weight									100

073 SURVEYING

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Surveying syllabus for Ordinary Level of Secondary Education. It emphasises on applying the competence-based assessment approach. Despite the adjustments made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination intends to assess the extent to which the candidates can:

- 2.1 use surveying tools and equipment for Civil Engineering works;
- 2.2 apply surveying concepts for designing simple structures; and
- 2.3 apply simple theories of computation of earthworks.

3.0 GENERAL COMPETENCES

The examination will test the candidates' ability in demonstrating how to:

- 3.1 handle and use surveying equipment and tools in the field;
- 3.2 process surveying data and use them to prepare maps, profiles and sections;
- 3.3 determine areas of maps and sections of roads for calculations of earthworks; and
- 3.4 determine volumes for parts of roads for calculations of earthworks.

4.0 EXAMINATION RUBRIC

There will be **one (1)** examination paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will be required to answer a total of **13** questions which will weigh **100** marks.

Section A will comprise **two (2)** questions. One question will consist of **ten (10)** multiple-choice items and another one will consist of **five (5)** matching items. Each item in both the multiple-choice question and matching items will consist of **one (1)** mark, making a total of **15** marks in this section. Candidates will be required to answer **all** the questions.

Section B will comprise **eight (8)** short answer questions, each weighing **five (5)** marks, making a total of **40** marks in this section. Candidates will be required to answer **all** the questions.

Section C will comprise **four (4)** structured questions. Candidates will be required to answer **three (3)** questions. Each question will weigh **15** marks, making a total of **45** marks in this section.

5.0 THE EXAMINATION CONTENT

The candidates will be tested on the following topics:

- 5.1 Introduction to surveying
- 5.2 Safety
- 5.3 Surveying instruments
- 5.4 Chain surveying
- 5.5 Chain and compass traversing
- 5.6 Levelling
- 5.7 Contouring
- 5.8 Areas and volumes
- 5.9 Theodolite

073 Surveying Table of Specification

S/n	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Introduction to surveying							3	13.04
2	Safety							3	13.04
3	Surveying instruments							2	8.70
4	Chain surveying							3	13.04
5	Chain and compass traversing							2	8.70
6	Levelling							3	13.04
7	Contouring							3	13.04

8	Areas and volumes							2	8.70
9	Theodolite							2	8.70
Total Number of Items								23	
Total Percentage Weight									100

074 CARPENTRY AND JOINERY

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Carpentry and Joinery syllabus for Ordinary Level of Secondary Education. It emphasises on applying the competence-based assessment approach. Despite the amendments made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination intends to assess the extent to which the candidates are able to:

- 2.1 understand material properties for carpentry and joinery facilities;
- 2.2 use the appropriate working facilities for woodwork projects; and
- 2.3 apply simple theories of computation to prepare cost estimates for woodwork.

3.0 GENERAL COMPETENCES

The examination will test the candidates' ability to:

- 3.1 select and demonstrate how to use timber in making furniture and construction works in general;
- 3.2 construct house components and fittings out of timber;
- 3.3 use various hand tools and machines/equipment for different woodworks;
- 3.4 maintain the required service of woodwork tools and machines; and
- 3.5 demonstrate how to prepare cost estimates for various woodwork projects.

4.0 EXAMINATION RUBRIC

There will be **one (1)** examination paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will be required to answer a total of **13** questions which will weigh **100** marks.

Section A will comprise **two (2)** questions. One question will consist of **ten (10)** multiple-choice items and another one will consist of **five (5)** matching items. Each item in both the multiple-choice question and matching items

will consist of **one (1)** mark, making a total of **15** marks in this section. Candidates will be required to answer **all** the questions.

Section B will comprise **eight (8)** short answer questions, each weighing **five (5)** marks, making a total of **40** marks in this section. Candidates will be required to answer **all** the questions.

Section C will comprise **four (4)** structured questions. Candidates will be required to answer **three (3)** questions. Each question will weigh **15** marks, making a total of **45** marks in this section.

5.0 EXAMINATION CONTENT

- 5.1 Introduction to carpentry and joinery
- 5.2 Safety
- 5.3 Tools and equipment
- 5.4 Plants/machines
- 5.5 Timber
- 5.6 Truing up timber
- 5.7 Joints
- 5.8 Glues and adhesives
- 5.9 Iron mongery
- 5.10 Cabinet making
- 5.11 Finishes and finishing
- 5.12 Scaffolds and scaffolding
- 5.13 Timbering to trenches
- 5.14 Centring
- 5.15 Formwork
- 5.16 Shoring
- 5.17 Partitions
- 5.18 Doors
- 5.19 Windows
- 5.20 Roofs
- 5.21 Ceiling construction
- 5.22 Wooden floors
- 5.23 Wooden stairs and staircases
- 5.24 Costing

074 Carpentry and Joinery Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Introduction							-	-
2	Safety							1	4.35
3	Tools and equipment							1	4.35
4	Plants/machines							1	4.35
5	Timber							1	4.35
6	Truing up timber							1	4.35
7	Joints							1	4.35
8	Glues and adhesives							1	4.35
9	Iron mongery							1	4.35
10	Cabinet making							1	4.35
11	Finishes and finishing							1	4.35
12	Scaffolds and scaffolding							1	4.35
13	Timbering to trenches							1	4.35
14	Centring							1	4.35
15	Formwork							1	4.35
16	Shoring							1	4.35
17	Partitions							1	4.35
18	Doors							1	4.35
19	Windows							1	4.35
20	Roofs							1	4.35
21	Ceiling construction							1	4.35
22	Wooden floors							1	4.35
23	Wooden stairs and staircases							1	4.35
24	Costing							1	4.35

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
Total Number of Items								23	
Total Percentage Weight									100.00

075 BRICKWORK AND MASONRY

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Brickwork and Masonry syllabus for Ordinary Level of Secondary Education. It emphasises on applying the competence-based assessment approach. Despite the amendments made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination intends to assess the extent to which the candidates can:

- 2.1 use bricks, blocks and stones in the construction of building up to a single storey;
- 2.2 use theories and principles in interpretation and use of architectural drawings for construction works; and
- 2.3 apply simple theories of computation to prepare cost estimates and estimate amount for various building materials.

3.0 GENERAL COMPETENCES

The examination will test candidates' ability to:

- 3.1 apply knowledge on construction of single storey buildings using blocks, bricks, stones and concrete, and installation of sanitary fittings and drainage works;
- 3.3 interpret working drawings;
- 3.4 estimate amount of building materials; and
- 3.6 prepare cost estimates for brickworks and masonry.

4.0 EXAMINATION RUBRIC

There will be **one (1)** examination paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will be required to answer a total of **13** questions which will weigh **100** marks.

Section A will comprise **two (2)** questions. One question will consist of **ten (10)** multiple-choice items and another one will consist of **five (5)** matching items. Each item in both the multiple-choice question and matching items will consist of **one (1)** mark, making a total of **15** marks in this section. Candidates will be required to answer **all** the questions.

Section B will comprise **eight (8)** short answer questions, each weighing **five (5)** marks, making a total of **40** marks. Candidates will be required to answer **all** the questions in this section.

Section C will comprise **four (4)** structured questions. Each candidate will be required to answer **three (3)** questions. Each question will weigh **15** marks, making a total of **45** marks in this section.

5.0 EXAMINATION CONTENT

The candidates will be tested on following topics:

- 5.1 Introduction to brickwork and masonry
- 5.2 Safety
- 5.3 Tools, plants and equipment
- 5.4 Bricks and block making
- 5.5 Mortar
- 5.6 Bonding
- 5.7 Foundation
- 5.8 Concrete
- 5.9 Walls
- 5.10 Columns and beams
- 5.11 Scaffolding
- 5.12 Floors
- 5.13 Fire-place
- 5.14 Drainage
- 5.15 Stone work
- 5.16 Stairs and staircase
- 5.17 Costing

075 Brickwork and Masonry Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Introduction to brickwork and masonry							1	4.35
2	Safety							1	4.35
3	Tools, plants and equipment							1	4.35
4	Bricks and block making							1	4.35
5	Mortar							1	4.35
6	Bonding							1	4.35
7	Foundation							3	13.04
8	Concrete							2	8.70
9	Walls							1	4.35
10	Columns and beams							2	8.70
11	Scaffolding							1	4.35
12	Floors							1	4.35
13	Fire-place							1	4.35
14	Drainage							3	13.04
15	Stone work							1	4.35
16	Stairs and staircase							1	4.35
17	Costing							1	4.35
Total Number of Items								23	
Total Percentage Weight									100

076 PAINTING AND SIGN WRITING

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Painting and Sign Writing syllabus for Ordinary Level of Secondary Education. It emphasises on applying the competence-based assessment approach. Despite the amendments made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination intends to assess the extent to which the candidates are able to:

- 2.1 use paints and stencils for painting and sign writing;
- 2.2 use principles of painting on different painting works;
- 2.3 use colour chart to design various decorative on painting works; and
- 2.4 estimate costs for painting and sign writing.

3.0 GENERAL COMPETENCES

The examination will test candidates' ability to:

- 3.1 mix and use various types of paints;
- 3.2 demonstrate how to paint different surfaces;
- 3.3 design various decorative effects on different surface;
- 3.4 design and sign-write decorative markings on sign-boards, lettering and patterns; and
- 3.5 prepare cost estimates of various paints and stencils for painting and sign writing.

4.0 EXAMINATION RUBRIC

There will be **one (1)** examination paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will be required to answer a total of **13** questions which will weigh **100** marks.

Section A will comprise **two (2)** questions. One question will consist of **ten (10)** multiple-choice items and another one will consist of **five (5)** matching items. Each item in both the multiple-choice question and matching items will consist of **one (1)** mark, making a total of **15** marks in this section. Candidates will be required to answer **all** the questions.

Section B will comprise **eight (8)** short-answer questions, each weighing **five (5)** marks, making a total of **40** marks. Candidates will be required to answer **all** the questions.

Section C will comprise **four (4)** structured questions. Candidates will be required to answer **three (3)** questions. Each question will weigh **15** marks, making a total of **45** marks.

5.0 EXAMINATION CONTENT

The candidates will be tested on following topics:

- 5.1 Introduction to painting and sign-writing
- 5.2 Safety
- 5.3 Tools, equipment and plants
- 5.4 Paints and paint materials
- 5.5 Painting techniques
- 5.6 Paints and textured finishes
- 5.7 Colour
- 5.8 Tie and dying
- 5.9 Sign writing and stencilling
- 5.10 Spraying and spray equipment
- 5.11 Glazing
- 5.12 Paint defects
- 5.13 Drawing design and decorative art
- 5.14 Costing

076 Painting and Sign-writing Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Introduction to painting and sign-writing							3	13.04
2	Safety							1	4.35
3	Tools, equipment and plants							1	4.35
4	Paints and paint materials							3	13.04
5	Painting techniques							2	8.70
6	Paints and textured finishes							3	13.04
7	Colour							1	4.35
8	Tie and dying							1	4.35
9	Sign writing and stencilling							1	4.35
10	Spraying and spray equipment							1	4.35
11	Glazing							3	13.04
12	Paint defects							1	4.35
13	Drawing design and decorative art							1	4.35
14	Costing							1	4.35
Total Number of Items								23	
Total Percentage Weight									100

077 PLUMBING

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Plumbing syllabus for Ordinary Level of Secondary Education. It emphasises on applying the competence-based assessment approach. Despite the revisions made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination intends to assess the extent to which the candidates are able to:

- 2.1 use tools, equipment and machines in the plumbing workshop;
- 2.2 maintain and use hand and machine tools in the plumbing workshop;
- 2.3 use various equipment to join the metals permanently or temporarily;
- 2.4 install and maintain the fittings on the water main and drainage works; and
- 2.5 prepare cost estimates for plumbing works.

3.0 GENERAL COMPETENCES

The examination will test the candidates' ability in demonstrating how to:

- 3.1 lay and repair pipe works which includes cold and hot water as well as drainage and sanitary works;
- 3.2 join metals by welding and soldering;
- 3.3 install pumps and mains;
- 3.4 use machines and hand tools; and
- 3.5 prepare cost estimates for plumbing works.

4.0 EXAMINATION RUBRIC

There will be **one (1)** examination paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will be required to answer a total of **13** questions which will weigh **100** marks.

Section A will comprise **two (2)** questions. One question will consist of **ten (10)** multiple-choice items and another one will consist of **five (5)** matching items. Each item in both the multiple choice question and matching items

will consist of **one (1)** mark, making a total of **15** marks in this section. Candidates will be required to answer **all** the questions.

Section B will comprise **eight (8)** short answer questions, each weighing **five (5)** marks, making a total of **40** marks. Candidates will be required to answer **all** the questions.

Section C will comprise **four (4)** structured questions. Candidates will be required to answer **three (3)** out of four questions. Each question will weigh **15** marks, making a total of **45** marks.

5.0 EXAMINATION CONTENT

The candidates will be tested on following topics:

- 5.17 Introduction to plumbing
- 5.18 Safety
- 5.19 Tools, equipment and plants
- 5.20 Materials
- 5.21 Protective coatings
- 5.22 Bending
- 5.23 Threading and Pipe Fitting
- 5.24 Joints and jointing
- 5.25 Water supply
- 5.26 Water mains
- 5.27 Plumbing science, calculations/hydraulics
- 5.28 Flow measurements
- 5.29 Domestic cold water supply
- 5.30 Domestic hot water supply
- 5.31 Heating appliances
- 5.32 Heaters
- 5.33 Taps, valves and ball valves
- 5.34 Soldering
- 5.35 Sanitary appliances
- 5.36 Traps for Sanitary appliances
- 5.37 Drainage system
- 5.38 Septic and cess-pools tank
- 5.39 Pumps
- 5.40 Welding
- 5.41 Pipe supports
- 5.42 Making hand tools
- 5.43 Costing

077 Plumbing Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Introduction to Plumbing and Safety							1	4.35
2	Tools, equipment and plants							1	4.35
3	Materials							1	4.4
4	Protective coatings							1	4.3
5	Bending							1	4.3
6	Pipe threading, support and fitting							1	4.3
7	Joints and jointing							1	2.5
8	Water supply							1	4.4
9	Water mains							1	4.3
10	Plumbing science, calculations/hydraulics							1	4.3
11	Flow measurements							1	4.3
12	Domestic cold water supply							1	5.6
13	Domestic hot water supply							1	4.3
14	Heating appliances							1	4.4
15	Heaters							1	4.3
16	Taps, valves and ball valves							1	4.3
17	Welding and soldering							1	5.6
18	Drainage system and sanitary appliances							1	4.3
19	Traps for sanitary appliances							1	4.4
20	Septic and cess-pools tank							1	6.7
21	Pumps							1	4.4
22	Making hand tools							1	1.5

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
23	Costing							1	4.4
Total Number of Items								23	
Total Percentage Weight									100

081 ELECTRICAL INSTALLATION

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Electrical Installation syllabus for Ordinary Level of Secondary Education. It emphasises on applying the competence-based assessment approach. Despite the revisions made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination will assess the extent to which candidates are able to:

- 2.1 integrate health and safety issues in electrical installation works;
- 2.2 perform domestic and industrial installations;
- 2.3 interpret wiring and circuit diagrams;
- 2.4 repair and maintain electrical machines; and
- 2.5 determine tariffs governing electrical installations.

3.0 GENERAL COMPETENCES

The examination will assess the candidates' ability to:

- 3.1 use appropriate tools and equipment on electrical installation works;
- 3.2 apply different laws governing electric behaviour;
- 3.3 calculate electrical parameters;
- 3.4 distinguish types of motors and generators for both D.C. and A.C. supply;
- 3.5 determine domestic and industrial power consumptions cost of a given tariff;
- 3.6 interpret circuit/wiring diagrams;
- 3.7 adhere to all relevant regulations governing electrical installations;
- 3.8 design and execute different types of electric installations;
- 3.9 perform preventive and corrective maintenance of electric machines; and
- 3.10 inspect and test electrical installation.

4.0 EXAMINATION RUBRIC

There will be **one (1)** paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will be

required to answer a total of **13** questions which will weigh **100** marks.

Section A will consist of **one (1)** multiple-choice question with **ten (10)** items. Each item will carry **one (1)** mark. Candidates will be required to respond to **all** the items in this section. Hence, the section will weigh a total of **10** marks.

Section B will consist of **nine (9)** short answer questions. Each question will weigh **five (5)** marks. Candidates will be required to answer **all** the questions in this section. Therefore, the section will weigh a total of **45** marks.

Section C will consist of **four (4)** structured questions. Candidates will be required to answer **three (3)** questions from this section. Each question will weigh **15** marks. Thus, the section will weigh a total of **45** marks.

Note: When attempting questions in this paper, candidates will be allowed to use non-programmable calculators.

5.0 EXAMINATION CONTENT

The candidates will be assessed on following topics:

- 5.1 Safety
- 5.2 Tools
- 5.3 Electrical accessories and electrical symbols (ISO)
- 5.4 Conductors, insulators and cables
- 5.5 Supply system
- 5.6 Sheathed wiring system
- 5.7 Conduit, trucking and ducts
- 5.8 Special wiring system
- 5.9 Consumers circuits
- 5.10 Protective devices
- 5.11 Lighting system
- 5.12 Electric heating
- 5.13 Electric signalling
- 5.14 Tariffs

- 5.15 Transformers
- 5.16 D.C. generators
- 5.17 D.C. motors
- 5.18 A.C. generators
- 5.19 A.C. Three-phase motors
- 5.20 A.C. Single-phase motors
- 5.21 Earthing
- 5.22 Measuring instruments
- 5.23 Inspection and testing
- 5.24 Domestic wiring

081 Electrical Installation Table of Specification

S/N	Topic	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation		
1	Safety and tools							1	7.7
2	Electrical accessories and electrical symbols (ISO)							1	2.6
3	Conductors, insulators							1	2.6
4	Supply system							1	6.5
5	Sheathed wiring system							1	3.8
6	Conduit, trucking and							1	3.8
7	Special wiring system							1	2.6
8	Consumers circuits							1	6.5
9	Protective devices							1	3.8
10	Lighting system							1	1.3
11	Electric heating							1	5.1
12	Electric signalling							1	5.1
13	Tariffs							1	2.6

S/N	Topic	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation		
14	Transformers							1	6.5
15	D.C. generators							1	5.1
16	D.C. motors							1	5.1
17	A.C. generators							1	7.7
18	A.C. Three phase motors							1	2.6
19	A.C. Single phase motors							1	3.8
20	Earthing							1	3.8
21	Measuring instruments							1	3.8
22	Inspection and testing							1	3.8
23	Domestic wiring							1	3.8
Total Number of Items								23	
Total Percentage Weight									100

082 ELECTRICAL ENGINEERING SCIENCE

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Electrical Engineering Science syllabus for Ordinary Level of Secondary Education. It emphasises on applying the competence-based assessment approach. Despite the amendments made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination will assess the extent to which candidates are able to:

- 2.1 solve problems related to electrical science;
- 2.2 describe different types of instruments and machines related to this science; and
- 2.3 lay-down experiments in their respective specialisation.

3.0 GENERAL COMPETENCES

The examination will assess the candidates' ability to:

- 3.1 identify different methods of generating electric power;
- 3.2 apply electrical laws for different operations and behaviours;
- 3.3 interpret different terminologies used in this field;
- 3.4 solve problems involving electric circuits;
- 3.5 calculate electric machine parameters;
- 3.6 describe different operations and application of electrical machines;
- 3.7 describe the construction of different instruments and machines;
- 3.8 calculate the changed circuit parameters due to change in temperature; and
- 3.9 describe construction and application of rectifiers in electric circuits.

4.0 EXAMINATION RUBRIC

There will be **one (1)** paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will be required to attempt a total of **13** questions which will weigh **100** marks.

Section A will consist of **one (1)** multiple-choice question with **ten (10)** items. Each item will carry **one (1)** mark. Candidates will be required to

respond to **all** the items in this section. Thus, the section will weigh a total of **10** marks.

Section B will consist of **nine (9)** short-answer questions. Each question will weigh **five (5)** marks. Candidates will be required to answer **all** the questions in this section. Therefore, the section will weigh a total of **45** marks.

Section C will consist of **four (4)** structured questions. Each question will weigh **15** marks. Candidates will be required to answer **three (3)** questions from this section. Hence, the section will weigh a total of **45** marks.

Note: When attempting questions in this paper candidates will be allowed to use non-programmable calculators.

5.0 EXAMINATION CONTENT

The candidates will be assessed on the following topics:

- 5.1 Units and their conversion
- 5.2 Nature of electricity
- 5.3 Effects of electric current
- 5.4 Electric heating
- 5.5 Magnetism and electromagnetisms
- 5.6 Measuring instruments
- 5.7 Transformers
- 5.8 Batteries and cells
- 5.9 Conductors and cables
- 5.10 A.C. Voltages
- 5.11 D.C. circuits
- 5.12 A.C. circuits
- 5.13 D.C. machines
- 5.14 A.C. machines
- 5.15 Three-phase circuits
- 5.16 Illumination
- 5.17 Rectifiers
- 5.18 Cathode ray tube.

082 Electrical Engineering Science Table of Specification

S/N	Topic	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation		
1	Units and their conversion							1	4.6
2	Nature of electricity							1	4.6
3	Effects of electric current							1	6.2
4	Electric heating							2	9.1
5	Magnetism and Electromagnetisms							2	6.2
6	Measuring instruments							1	4.6
7	Transformers							1	4.6
8	Batteries and cells							1	4.6
9	Conductors and cables							1	3.1
10	A.C. Voltages							1	6.2
11	D.C. circuits							1	3.1
12	A.C. circuits							1	6.2
13	D.C. machines							2	10.8
14	A.C. machines							2	9.1
15	Three-phase circuits							2	6.2
16	Illumination							1	1.5
17	Rectifiers							1	6.2
18	Cathode ray tube.							1	3.1
Total Number of Items								23	
Total Percentage Weight									100

083 RADIO AND TELEVISION SERVICING

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Radio and Television Servicing syllabus for Ordinary Level of Secondary Education. It emphasises on applying the competence-based assessment approach. Despite the revisions made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination will assess the extent to which candidates are able to:

- 2.1 adhere to workshop safety rules and regulations;
- 2.2 describe the construction and operation of radio and TV sets;
- 2.3 analyse different parameters associated with radio and TV sets; and
- 2.4 perform diagnosis, service and repair of radio and TV receivers.

3.0 GENERAL COMPETENCES

The examination will assess candidates' ability to:

- 3.1 identify electronic component symbols;
- 3.2 draw electronic circuit diagrams;
- 3.3 interpret circuit diagrams;
- 3.4 analyse electrical parameters used in radio and TV receivers;
- 3.5 use electronic tools and equipment;
- 3.6 describe types of RF and TV transmission;
- 3.7 diagnose faults in radio and TV receivers;
- 3.8 perform preventive and corrective maintenance;
- 3.9 repair radio and TV sets; and
- 3.10 apply workshop safety rules and regulations.

4.0 EXAMINATION RUBRIC

There will be **one (1)** paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will be required to attempt a total of **13** questions which will weigh **100** marks.

Section A will consist of **one (1)** multiple-choice question with **ten (10)** items. Each item will carry **one (1)** mark. Candidates will be required to

answer **all** the items in this section. Hence the section will weigh a total of **10** marks.

Section B will consist of **nine (9)** short-answer questions. Each question will weigh **five (5)** marks. Candidates will be required to answer **all** the questions in this section. Overall, the section will weigh a total of **45** marks.

Section C will consist of **four (4)** structured questions. Each question will weigh **15** marks. Candidates will be required to answer **three (3)** questions from this section. Therefore, the section will weigh a total of **45** marks.

Note: When attempting questions in this paper, candidates will be allowed to use non-programmable calculators.

5.0 EXAMINATION CONTENT

The candidates will be assessed on following topics:

- 5.1 Safety
- 5.2 Tools and test equipment
- 5.3 Electronic circuit components
- 5.4 Soldering and desoldering
- 5.5 Semiconductors
- 5.6 Semiconductor diodes
- 5.7 Power supplies
- 5.8 Bipolar transistors
- 5.9 Transistor amplifiers
- 5.10 Multistage amplifiers
- 5.11 Oscillators
- 5.12 Tuned circuits
- 5.13 Transducers
- 5.14 Antennae
- 5.15 RF signals
- 5.16 Modulation
- 5.17 Radio receivers
- 5.18 Transistor converter circuits
- 5.19 Detection/Demodulation
- 5.20 Power gain in decibel
- 5.21 Integrated circuits
- 5.22 Radio alignment
- 5.23 Servicing techniques
- 5.24 Television receivers

- 5.25 Picture tube
- 5.26 Television receiver power supply
- 5.27 Video tape recorder
- 5.28 Television receiver servicing

083 Radio and Television Servicing Table of Specification

S/N	Topic	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation		
1	Safety							1	2.9
2	Tools and test equipment								2.9
3	Electronic circuit components							1	5.9
4	Soldering and disordering							1	1.5
5	Semiconductors and Semiconductor diodes							1	16.2
6	Power supplies							1	4.4
7	Bipolar transistors							1	1.5
8	Transistor amplifiers & Multistage amplifiers							1	10.3
9	Oscillators							1	4.4
10	Tuned circuits							1	2.9
11	Transducers							1	2.9
12	Antennae							1	2.9
13	Modulation & RF signals							1	5.9
14	Radio receivers							1	4.4
15	Transistor converter circuits and Detection/Demodulation							1	4.4
16	Power gain in decibel							1	1.5
17	Integrated circuits							1	1.5
18	Radio alignment and Servicing techniques							1	5.9
19	Television receivers							1	8.8
20	Picture tube							1	1.5
21	Television receiver power supplies							1	1.5
22	Video tape recorder							1	1.5
23	Television receiver servicing							1	4.4

Total Number of Items	23	
Total Percentage Weigh		100

084 ELECTRICAL DRAUGHTING

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Electrical Draughting syllabus for Ordinary Level of Secondary Education. It emphasises on applying the competence-based assessment approach. Despite the revisions made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination will assess the extent to which candidates are able to:

- 2.1 interpret simple mechanical drawings;
- 2.2 draw electrical and wiring diagrams;
- 2.3 prepare materials for work schedule; and
- 2.4 choose properly the instruments and equipment suitable for a certain job.

3.0 GENERAL COMPETENCES

The examination will assess the candidates' ability to:

- 3.1 draw pictorial diagrams;
- 3.2 identify electrical, electronic and machines drawing symbols;
- 3.3 use electrical, electronic and machines component symbols in drawings;
- 3.4 draw circuit diagrams from wiring diagrams;
- 3.5 use drawing instruments and equipment appropriately;
- 3.6 lay out diagrams from the given schematic drawing; and
- 3.7 prepare assembly drawings.

4.0 EXAMINATION RUBRIC

There will be **one (1)** examination paper of **three (3)** hours. The paper will comprise sections A and B with a total of **seven (7)** questions. Candidates will be required to answer a total of **six (6)** questions which will weigh **100** marks.

Section A will consist of **two (2)** questions on Technical Drawing. One question will consist of **ten (10)** multiple-choice items and each item will carry **one (1)** mark. Another question will be a structured question and will weigh **30** marks. Candidates will be required to answer **all** the questions in this section. Hence, the section will weigh a total of **40** marks.

Section B will consist of **five (5)** structured questions from electrical and electronic drawings. Each question will weigh **15** marks. Candidates will be required to answer **four (4)** questions from this section. Therefore, the section will weigh a total of **60** marks.

5.0 EXAMINATION CONTENT

The candidates will be assessed on the following topics:

- 5.1 Drawing instruments and equipment
- 5.2 Standard ISO and drawing sheets
- 5.3 Lines
- 5.4 Lettering
- 5.5 Geometrical construction in plane geometry
- 5.6 Scales
- 5.7 Similar figures
- 5.8 Equal areas
- 5.9 Pictorial drawing
- 5.10 Orthographic projection
- 5.11 Auxiliary views
- 5.12 Bending lines and curves
- 5.13 Loci
- 5.14 Dimensioning
- 5.15 Freehand sketching

- 5.16 Machine drawing
- 5.17 Building drawing
- 5.18 Electrical symbols
- 5.19 Electrical diagrams
- 5.20 Electronic symbols
- 5.21 Electronic diagrams
- 5.22 Printed circuit boards

084 Electrical Draughting Table of Specification

S/N	Topic	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation		
1	Drawing instruments and equipment/Standard ISO and drawing sheets							1	6.9
2	Lines and lettering							1	5.2
3	Geometrical construction in plane geometry							1	5.2
4	Scales/similar figures							1	5.2
5	Equal areas							1	6.9
6	Pictorial drawing/Orthographic projection							1	12.1
7	Auxiliary views							1	5.2
8	Bending lines and curves							1	8.6

S/N	Topic	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation		
9	Loci							1	8.6
10	Dimensioning							1	5.2
11	Machine drawing/ freehand							1	8.6
12	Building drawing							1	3.4
13	Electrical/Electronic							1	6.9
14	Electrical diagrams							1	6.9
15	Electronic diagrams							1	1.7
16	Printed circuit boards							1	3.4
Total Number of Items								1	
Total Percentage Weight									100

085 REFRIGERATION AND AIR CONDITIONING

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Refrigeration and Air Conditioning syllabus for Ordinary Level of Secondary Education. It emphasises on applying the competence-based assessment approach. Despite the revisions made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination intends to assess the extent to which the candidates can:

- 2.1 analyse refrigeration cycles;
- 2.2 use the psychometric chart;
- 2.3 perform preventive maintenance;
- 2.4 perform service of air conditioners and refrigerators;
- 2.5 repair refrigeration and air conditioning units.

3.0 GENERAL COMPETENCES

The examination will test the candidates' ability to:

- 3.1 demonstrate how to use steam tables and psychometric charts;
- 3.2 do calculations involved in refrigeration cycles;
- 3.3 analyse types, properties, specific uses and the advantages of different refrigerants;
- 3.4 describe the functions of each of the components in a refrigerators and air conditioners;
- 3.5 describe refrigeration and air conditioning principles;
- 3.6 explain the relationship between heat temperature and pressure of refrigerants;
- 3.7 select and use correct tools for both refrigeration and air conditioning activities;
- 3.8 describe methods of forming pipe joints for refrigeration and air conditioning;
- 3.9 demonstrate skills on how to perform preventive maintenance on refrigeration and air conditioning units; and
- 3.10 demonstrate skills on how to diagnose and repair refrigeration and air conditioning units.

4.0 EXAMINATION RUBRIC

There will be **one (1)** examination paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions out of which the candidates will be required to answer a total of **13** questions which will weigh **100** marks.

Section A will consist of **one (1)** multiple-choice question with **10** items, each weighing **one (1)** mark, making a total of **10** marks in this section. Candidates will be required to answer all the questions.

Section B will consist of **nine (9)** short-answer questions, each weighing **five (5)** marks making a total of **45** marks in this section. Candidates will be required to answer all the questions.

Section C will comprise **four (4)** structured questions, each weighing **15** marks. Candidates will be required to attempt **three (3)** questions, making a total of **45** marks in this section.

5.0 EXAMINATION CONTENT

The examination will be set from the following topics:

- 5.1 Refrigeration
- 5.2 Air conditioning
- 5.3 Tools and equipment
- 5.4 Brazing
- 5.5 Heat, temperature and pressure
- 5.6 Refrigerants
- 5.7 Basic refrigeration cycle
- 5.8 Compressors
- 5.9 Condensers
- 5.10 Expansion valves
- 5.11 Evaporators
- 5.12 Electricity
- 5.13 Cycle associated components
- 5.14 Domestic appliances
- 5.15 Commercial and industrial refrigeration
- 5.16 Principles of air conditioning
- 5.17 Trouble-shooting

085 Refrigeration and Air Conditioning Table of Specification

S/N	Topics	Cognitive Skills to be Tested							
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating	Number of Items	Percentage Weight per Topic
1	Refrigeration							1	2.32
2	Air conditioning							1	2.32
3	Tools and equipment							1	6.97
4	Brazing							1	4.66
5	Heat, temperature and pressure							2	9.3
6	Refrigerants							2	9.3
7	Basic refrigeration cycle							2	6.97
8	Compressors							1	4.66
9	Condensers							1	4.66
10	Expansion valves							1	4.66
11	Evaporators							1	4.66
12	Electricity							2	9.3
13	Cycle associated components							1	2.32
14	Domestic appliances							2	9.3
15	Commercial and industrial refrigeration							1	4.66
16	Principles of Air Conditioning							1	6.97
17	Trouble-shooting							2	6.97
Total Number of Items								23	
Total Percentage Weight									100

086 PLANT AND EQUIPMENT MAINTENANCE

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Plant and Equipment Maintenance syllabus for Ordinary Level of Secondary Education. It emphasises on applying the competence-based assessment approach. Despite the revisions made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination will test candidates' ability to:

- 2.1 read and interpret plants layout;
- 2.2 use maintenance equipment;
- 2.3 do repair work on plants; and
- 2.4 work out cost estimates for repair.

3.0 GENERAL COMPETENCES

The examination will test the candidates' ability to:

- 3.1 explain workshop safety precautions;
- 3.2 identify the location of plant and equipment in different workshop departments;
- 3.3 demonstrate how to draw and effect workshop arrangements according to design layout;
- 3.4 demonstrate how to organise service and maintenance schedule for plant and equipment;
- 3.5 demonstrate how to carry out maintenance plans;
- 3.6 demonstrate how to diagnose shop apparatus and equipment for repair;
- 3.7 demonstrate how to undertake plant and equipment repair; and
- 3.8 demonstrate how to prepare cost estimates for maintenance and repair works

4.0 EXAMINATION RUBRIC

There will be one paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions out of which the candidates will be required to answer a total of **13** questions which will weigh **100** marks.

- 4.1 **Section A** will comprise **one (1)** multiple-choice question with **ten (10)** items, each weighing **one (1)** mark, making a total of **10** marks in this section. Candidates will be required to answer **all** the questions.
- 4.2 **Section B** will consist of **nine (9)** short-answer questions each weighing **five (5)** marks, making total **45** marks in this section. Candidates will be required to answer **all** the questions.
- 4.3 **Section C** will consist of **four (4)** structured questions each weighing **15** marks. Candidates will be required to attempt **three (3)** questions from this section, making a total of **45** marks in this section.

5.0 EXAMINATION CONTENT

The examination will be set from the following topics:

- 5.1 Maintenance
 - 5.1.1 Aim and general principals of maintenance
 - 5.1.2 Maintenance
 - 5.1.3 Types of work related to maintenance
 - 5.1.4 The maintenance cycle
- 5.2 Preventive maintenance
- 5.3 Corrective maintenance
 - 5.3.1 Preventive maintenance
 - 5.3.2 Corrective maintenance
- 5.4 Instruments and other aids for condition checking
- 5.5 Practical condition checks
- 5.6 The implementation of maintenance work.
- 5.7 Maintenance systems
 - 5.7.1 Classification of maintenance system
 - 5.7.2 Computerised Preventive maintenance system
- 5.8 Repair tools and repair methods
- 5.9 Machine guards

086 Plant and Equipment Maintenance Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Maintenance							4	25.70
2	Preventive maintenance							3	10.70
3	Corrective maintenance							3	10.70
4	Instruments and other aids for condition checking							2	7.69
5	Practical condition checks							2	7.69
6	The implementation of maintenance work							2	7.69
7	Maintenance systems							3	12.38
8	Repair tools and repair methods							2	8.69
9	Machine guards							2	8.76
Total Number of Items								23	
Total Percentage Weight									100

092 WORKSHOP TECHNOLOGY

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Workshop Technology syllabus for Ordinary Level of Secondary Education. It emphasises on applying the competence-based assessment approach. Despite the revisions made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination intends to assess the extent to which the candidates are able to:

- 2.1 choose right materials for production of different workshop jobs;
- 2.2 explain methods of production and modification of properties of metals;
- 2.3 determine proper combinations of parts for different machines or mechanisms; and
- 2.4 use workshop tools and equipment in a way that their productivity can be maximised.

3.0 GENERAL COMPETENCES

The examination will test the candidates' ability to:

- 3.1 demonstrate skills on how to select various engineering materials such as metals in different mechanical engineering trades;
- 3.2 demonstrate skills on how to use proper type of engineering materials such as metals in different mechanical engineering trades;
- 3.3 perform hot and cold working of metals;
- 3.4 perform heat treatment to modify properties of metals;
- 3.5 select and apply correct lubricants for the purpose of prolonging tool and machine life;
- 3.6 calculate various types of fit between mating parts of machines or mechanisms; and
- 3.7 perform metal cutting operations correctly and safely.

4.0. EXAMINATION RUBRIC

There will be **one (1)** examination paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions out of which the

candidates will be required to answer **13** questions which will weigh **100** marks.

Section A will consist of **one (1)** multiple-choice question with **ten (10)** items, each weighing **one (1)** mark, making a total of **ten (10)** marks in this section. Candidates will be required to respond to all the items in this section.

Section B will consist of **nine (9)** short-answer questions, each weighing **five (5)** marks making a total of **45** marks. Candidates will be required to answer **all** the questions in this section.

Section C will comprise **four (4)** structured questions, each weighing **15** marks. Candidates will be required to attempt **three (3)** questions, making a total of **45** marks in this section.

5.0 EXAMINATION CONTENT

The candidates will be tested on the following topics:

- 5.1 Engineering materials
- 5.2 Production of engineering materials
- 5.3 Lubrication/coolant
- 5.4 Heat treatment
- 5.5 Physical identification of metals
- 5.6 Properties of metals
- 5.7 Limits and fits

092 Workshop Technology Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Engineering materials							3	13.04
2	Production of engineering materials							10	43.48
3	Lubrication/coolants							2	8.69
4	Heat treatments							3	13.04
5	Physical identification of metals							1	4.35
6	Properties of metals							2	8.69
7	Limits and fits							2	8.69
Total Number of Items								23	
Total Percentage Weight									100

093 MOTOR VEHICLE MECHANICS

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Motor Vehicle Mechanics Syllabus for Ordinary Level of Secondary Education. It emphasises on the application of the competence-based assessment approach. Despite the revisions made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination will test the candidates' ability to:

- 2.1 describe the construction of motor vehicles, both petrol and diesel engines;
- 2.2 explain the construction and functions of automobile parts and components; and
- 2.3 evaluate car roadworthiness.

3.0 GENERAL COMPETENCES

The examination will test the candidates' ability to:

- 3.1 explain workshop safety and precautions;
- 3.2 demonstrate how to use hand tools and other equipment;
- 3.3 measure and relate mathematics and science;
- 3.4 interpret engine and vehicle testing results;
- 3.5 demonstrate how to diagnose faults;
- 3.6 analyse failure and evaluate completed repair;
- 3.7 demonstrate how to service and repair different systems in vehicles;
- 3.8 demonstrate how to repair related equipment; and
- 3.9 explain the functions of various parts of a motor vehicle.

4.0 EXAMINATION RUBRIC

There will be **one (1)** examination paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will

be required to answer a total of **13** questions which will weigh **100** marks.

Section A will comprise **one (1)** multiple choice question with **ten (10)** items. Each item will carry **one (1)** mark, making a total of **10** marks. Candidates will be required to answer **all** questions.

Section B will comprise **nine (9)** short-answer questions, each weighing **five (5)** marks, making a total of **45** marks. Candidates will be required to answer **all** the questions.

Section C will comprise **four (4)** structured questions. Each question will weigh **15** marks. Candidates will be required to answer **three (3)** questions, making a total of **45** marks in this section.

5.0 EXAMINATION CONTENT

The examination will be set from the following topics:

- 5.1 General safety regulations;
- 5.2 Tools and equipment;
- 5.3 Vehicle layout and parts;
- 5.4 Fasteners and locking devices;
- 5.5 Power unit (Engine);
- 5.6 Fuel system for petrol and diesel engines;
- 5.7 Ignition systems;
- 5.8 Lubrication system;
- 5.9 Cooling system;
- 5.10 Carburetion;
- 5.11 Engine and vehicle testing;
- 5.12 Transmission system;
- 5.13 Braking system;
- 5.14 Suspension system;
- 5.15 Steering system;
- 5.16 Wheels and Tyres;
- 5.17 Bodywork and fitments.

093 Motor Vehicle Mechanics Table of Specification

S/N	Topic	Cognitive Levels to be Tested						Number of Questions	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Safety and regulations							0	1.3
2	Tools and equipment							1	2.6
3	Vehicle layout							3	13.2
4	Locking devices							1	2.6
5	Power Unit (Engine)							1	5.3
6	Petrol and diesel engines							4	15.8
7	Ignition system							1	2.6
8	Lubrication							1	5.3
9	Cooling system							1	2.6
10	Carburetion							1	3.9
11	Engine and vehicle testing							1	2.6
12	Transmission							2	6.6
13	Brakes							2	9.2
14	Suspension system							1	5.3
15	Steering system							1	7.9
16	Wheels and types							1	10.5
17	Body work and fitments							1	2.6
Total Number of Items								23	
Total Percentage Weight									100

094 WELDING AND METAL FABRICATION

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Welding and Metal Fabrication syllabus for Ordinary Level of Secondary Education. It emphasises primarily on applying the competence-based assessment approach. Despite the revisions made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination will assess the extent to which the candidates are able to:

- 2.1 explain different welding equipment;
- 2.2 describe welding rods;
- 2.3 weld different metals using different technique and in different positions;
- 2.4 describe the procedure on how to cut, bend, fold and fabricate various jobs; and
- 2.5 describe various types of welding test and inspection.

3.0 GENERAL COMPETENCES

The examination will test the candidates' ability to:

- 3.1 use the filler rods for welding different metals;
- 3.2 use various plants and equipment;
- 3.3 cut, bend, fold and fabricate various jobs;
- 3.4 use various plants and equipment in welding.
- 3.5 perform soft and hard brazing;
- 3.6 perform different welding processes; and
- 3.7 perform different welding test and inspection.

4.0 EXAMINATION RUBRIC

There will be **one (1)** paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will be required to answer **13** questions which will weigh **100** marks.

Section A will consist of **one (1)** multiple-choice question with **ten (10)** items, each weighing one **(1)** mark, making a total **10** marks in this section. Candidates will be required to respond to **all** the items.

Section B will consist of **ten (10)** short answer questions each weighing **six (6)** marks, making a total **60** marks in this section. Candidates will be required to answer **all** the questions.

Section C will comprise **three (3)** structured questions, each weighing **15** marks. Candidates will be required to attempt **two (2)** questions, weighing a total of **30** marks in this section.

5.0 EXAMINATION CONTENT

The candidates will be tested on the following topics:

- 5.1 Production of welding gases
 - 5.1.1 Oxygen gas
 - 5.1.2 Acetylene gas
- 5.2 Gas welding equipment and accessories
 - 5.2.1 Accessories
 - 5.2.2 Equipment
- 5.3 Gas welding operation
 - 5.3.1 Oxy-fuel flame welding
 - 5.3.2 Oxy-acetylene welding operation
- 5.4 Electric arc welding equipment and accessories
 - 5.4.1 Accessories
 - 5.4.2 Equipment
- 5.5 Electric Arc welding
 - 5.5.1 Electric arc welding operation
 - 5.5.2 Welding technique
- 5.6 Filler metals
 - 5.6.1 Filler rods
 - 5.6.2 Electrodes
- 5.7 Resistance welding
 - 5.7.1 Spot welding
 - 5.7.2 Seam welding
 - 5.7.3 Butt (Flash) welding
 - 5.7.4 Projection welding

- 5.8 Welding joints
 - 5.8.1 Edge joint
 - 5.8.2 Butt joint
 - 5.8.3 Conner joint
 - 5.8.4 Tee joint
 - 5.8.5 Lap joint
- 5.9 Welding positions
 - 5.9.1 Flat (Downhand)
 - 5.9.2 Horizontal
 - 5.9.3 Vertical
 - 5.9.4 Overhead
- 5.10 Hard soldering
 - 5.10.1 Bronze welding
 - 5.10.2 Brazing
 - 5.10.3 Silver soldering
- 5.11 Backfire and flash back
 - 5.11.1 Backfire
 - 5.11.2 Flash back
- 5.12 Sheet metal fabrication
 - 5.12.1 Materials
 - 5.12.2 Equipment
 - 5.12.3 Layout
- 5.13 Sheet metal operations
 - 5.13.1 Shearing
 - 5.13.2 Grooving
 - 5.13.3 Folding (Bending)
 - 5.13.4 Seaming
 - 5.13.5 Rolling
- 5.14 Pipe welding
 - 5.14.1 Types of pipes
 - 5.14.2 Joining of pipes
- 5.15 Welding defects
 - 5.15.1 Internal defects
 - 5.15.2 External defects

- 5.16 Distortions
 - 5.16.1 Types of distortion
 - 5.16.2 Causes and correction of distortion
- 5.17 Oxy-Acetylene flame cutting
 - 5.17.1 Principle of flame cutting
 - 5.17.2 Cutting torches and machines
- 5.18 Electric Arc manual cutting
 - 5.18.1 Types of equipment
 - 5.18.2 Current setting
- 5.19 Manifold system
 - 5.19.1 Construction
 - 5.19.2 Flashback arrestors
 - 5.19.3 Operation
 - 5.19.4 Safety
 - 5.19.5 Types of piping
- 5.20 Arc blow
- 5.21 Welding, heating and cutting tanks and containers
 - 5.21.1 Welding of new tanks and containers
 - 5.21.2 Tanks and containers with inflammable materials
- 5.22 Gas shielded welding
 - 5.22.1 Tungsten Inert Gas (TIG)
 - 5.22.2 Metal Inert Gas (MIG)
 - 5.22.3 Metal Active Gas Welding (MAG)
- 5.23 Weld inspection and tests
 - 5.23.1 Visual inspection
 - 5.23.2 Destructive tests
 - 5.23.3 Non-destructive test
- 5.24 Soft soldering

094 Welding and Metal Fabrication Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Production of welding gases							1	3.13
2	Gas welding equipment and accessories							1	4.23
3	Gas welding operation							1	4.13
4	Electric arc welding equipment and accessories							1	3.13
5	Electric arc welding							1	6.13
6	Filler metals							1	3.13
7	Resistance welding							1	6.25
8	Welding joints							1	7.83
9	Welding positions							1	6.25
10	Soldering							1	5.69
11	Backfire and flashback							1	3.13
12	Sheet metal fabrication							1	4.69
13	Sheet metal operations							1	3.13
14	Pipe welding							1	3.13
15	Welding defects							1	5.13
16	Distortions							1	3.13
17	Oxy-Acetylene flame cutting							1	3.13
18	Electric arc manual cutting							1	4.34
19	Manifold system							1	3.13
20	Arc blow							1	4.16
21	Welding, heating and cutting tanks and containers							1	2.89
22	Gas shielded welding							1	5.27
23	Weld inspection and tests							1	4.69
Total Number of Items								23	
Total Percentage Weight									100

095 FITTING AND TURNING

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Fitting and Turning syllabus for Ordinary Level of Secondary Education. It emphasises on the application of the competence-based assessment approach. Despite the amendments made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination intends to assess the extent to which the candidates are able to:

- 2.1 select and use appropriately various hand tools and equipment in fitting and turning as well as servicing and maintaining them;
- 2.2 operate various machines so as to cut various metals and shape them to the required accuracy and finishing;
- 2.3 make various spares by using machines and available materials;
- 2.4 use various techniques in joining metals;
- 2.5 develop safe working habits in doing jobs; and
- 2.6 describe the quality and important features of tools used in different machines.

3.0 GENERAL COMPETENCES

The examination will test the candidates' ability to:

- 3.1 describe different machines used for fitting and turning;
- 3.2 select suitable metal cutting hand tools such as files, drills, reamers, taps chisels and hacksaws;
- 3.3 demonstrate skills on how to service and maintain tools and equipment;
- 3.4 describe the construction of different machines;
- 3.5 describe the use of machines for working out metals e.g. cutting, drilling, grinding, tapering, shaping and finishing up;
- 3.6 demonstrate how to use measuring and marking tools correctly;
- 3.7 use both tools and machines safely;
- 3.8 demonstrate skills on how to make spares by using workshop machines;

- 3.9 demonstrate skills on how to use various techniques in joining metal; and
- 3.10 describe jobs done by various machines.

4.0 EXAMINATION RUBRIC

There will be **one (1)** examination paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will be required to answer **13** questions which will weigh **100** marks.

Section A will consist of **one (1)** multiple-choice question with **10** items, each weighing **one (1)** mark, making a total of **10** marks in this section. Candidates will be required to answer **all** the questions.

Section B will consist of **nine (9)** short-answer questions, each weighing **five (5)** marks making a total of **45** marks in this section. Candidates will be required to answer **all** the questions.

Section C will comprise **four (4)** structured questions, each weighing **15** marks. Candidates will be required to attempt **three (3)** questions, making a total of **45** marks in this section.

5.0 EXAMINATION CONTENT

The candidates will be tested on the following topics:

- 5.1 Workshop safety, precautions and regulations
- 5.2 Hand tools
- 5.3 Machines
- 5.4 Common tools
- 5.5 Drilling
- 5.6 Lathe machines
- 5.7 Metal joining
- 5.8 Precision tools
- 5.9 Lathe operations
- 5.10 Milling machines
- 5.11 Shaping machines
- 5.12 Grinding machines
- 5.13 Threads cutting and taper turning on lathe
- 5.14 Quality of surface finish

095 Fitting And Turning Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Remembering	Understanding	Applying		
1	Workshop safety, precautions and regulations							1	3.77
2	Hand tools							1	1.88
3	Machines							1	1.88
4	Common tools							3	16.98
5	Drilling							2	5.66
6	Lathe machines							2	9.43
7	Metal joining							1	5.66
8	Precision tools							1	3.77
9	Lathe operations							3	15.09
10	Milling machines							2	9.43
11	Shaping machines							2	7.55
12	Grinding machines							2	7.55
13	Threads cutting and taper turning on lathe							1	5.66
14	Quality of surface finish							1	5.66
Total Number of Items								23	
Total Percentage Weight									100

096 AUTO ELECTRICS

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Auto Electrics syllabus for Ordinary Level of Secondary Education. It emphasises on applying the competence-based assessment approach. Despite the adjustments made in this format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination will test the candidates' ability to:

- 2.1 explain construction and function of electrical components of automobiles;
- 2.2 describe different electrical systems in a car; and
- 2.3 repair some electrical systems.

3.0 GENERAL COMPETENCES

The examination will test the candidates' ability to:

- 3.1 practice workshop regulations;
- 3.2 demonstrate how to use common auto-electric hand tools and equipment;
- 3.3 demonstrate how to use basic concepts of electricity;
- 3.4 explain the magnetism as related to electricity;
- 3.5 explain the functions of electrical components in automobile; and
- 3.6 narrate repair techniques of electrical systems in an automobile.

4.0 EXAMINATION RUBRIC

There will be **one (1)** examination paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will be required to answer a total of **13** questions which will weigh **100** marks.

Section A will comprise **one (1)** questions consisting of **ten (10)** multiple-choice items. Each item will consist of **1** mark, making a total of **10** marks in this section. Candidates will be required to answer **all** the questions.

Section B will comprise **nine (9)** short answer questions, each weighing **five (5)** marks, making a total of **45** marks in this section. Candidates will be required to answer **all** the questions.

Section C will comprise of **four (4)** structured questions. Candidate will be required to answer **three (3)** out of four questions. Each question will weigh **15** marks, making a total of **45** marks in this section.

5.0 EXAMINATION CONTENT

The candidates will be tested on the following topics:

- 5.1 Introduction to the subject of Auto Electrics
- 5.2 Hand and power tools
- 5.3 Batteries
- 5.4 Charging system
- 5.5 Ignition system
- 5.6 Starting systems
- 5.7 Lighting systems
- 5.8 Auxiliary systems (Accessories)

096 Auto Electrics Table of Specification

S/N	Topic	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Introduction to the subject of Auto Electrics							2	10.5
2	Hand and power tools							1	2.6
3	Batteries							2	10.5
4	Charging system							4	15.8
5	Ignition system							4	15.8
6	Starting systems							1	5.3
7	Lighting systems							2	10.5
8	Auxiliary Systems (Accessories)							7	28.9
Total Number of Items								23	
Total Percentage Weight									100

097 MECHANICAL DRAUGHTING

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Mechanical Draughting syllabus for Ordinary Level of Secondary Education. It emphasises on applying the competence-based assessment approach. Despite the revisions made in the format there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination will test the extent to which candidates are able to:

- 2.1 read and interpret mechanical drawings;
- 2.2 read and draw mechanical drawings;
- 2.3 draw loci of mechanisms;
- 2.4 use limits, fits and tolerances in drawings;
- 2.5 draw different joints; and
- 2.6 draw orthographic projections.

3.0 GENERAL COMPETENCES

The examination will test the candidates' ability to:

- 3.1 identify drawing equipment;
- 3.2 identify and use different drawing lines;
- 3.3 use abbreviations for machine drawings;
- 3.4 draw auxiliary views, blending lines and curves drawings;
- 3.5 draw orthographic projections;
- 3.6 make pictorial drawings;
- 3.7 draw different joints;
- 3.8 use limits, fits and tolerances in drawings;
- 3.9 draw loci of different mechanisms; and
- 3.10 draw development and interpenetrations of machine components.

4.0 EXAMINATION RUBRIC

There will be **one (1)** examination paper of **three (3)** hours. The paper will comprise sections A and B with a total of **six (6)** questions. Candidates will be required to answer a total of **five (5)** questions which will weigh **100** marks.

Section A will consist of **two (2)** questions. One question will be multiple-choice question with **ten (10)** items, each weighing **one (1)** mark making a total of **10** marks. Question two will be a structured question on machine drawing and will weigh a total of **30** marks. Candidates will be required to answer both questions. Altogether the section will weigh a total of **40** marks.

Section B will consist of **four (4)** structured questions each weighing **20** marks. Candidates will be required to attempt **three (3)** questions, making a total of **60** marks in this section.

5.0 EXAMINATION CONTENT

The candidates will be tested on the following topics:

- 5.1 Draughting office/room
- 5.2 Drawing instruments and equipment
- 5.3 Standard ISO and drawing sheets
 - 5.3.1 Drawing sheet size and preparations
 - 5.3.2 Layout of drawing sheets
- 5.4 Lines
 - 5.4.1 Drawing elements
 - 5.4.2 Types of lines
- 5.5 Lettering
 - 5.5.1 Types and styles of letters
- 5.6 Geometrical construction in plane figure
 - 5.6.1 Lines
 - 5.6.2 Angles
 - 5.6.3 Plane figures
- 5.7 Scale
 - 5.7.1 Purpose
 - 5.7.2 Types
- 5.8 Similar figure
 - 5.8.1 Enlarging and reducing

- 5.9 Equal areas
 - 5.9.1 Triangle
 - 5.9.2 Rectangle
 - 5.9.3 Polygons
 - 5.9.4 Circle
 - 5.9.5 Pictorial drawings
 - 5.9.6 Oblique
 - 5.9.7 Isometric
- 5.10 Orthographic projection
 - 5.10.1 Purpose
 - 5.10.2 Principles planes
 - 5.10.3 First angle projection
 - 5.10.4 Third angle projection
 - 5.10.5 Angle symbols
- 5.11 Auxiliary views
 - 5.11.1 Purpose
 - 5.11.2 Types
 - 5.11.3 Point, lines and plane in space
- 5.12 Blending lines and curves
 - 5.12.1 Straight lines at right angle
 - 5.12.2 Straight lines at any angle
 - 5.12.3 Point and straight lines
 - 5.12.4 Lines and circle
 - 5.12.5 Two circles
- 5.13 Loci and loci mechanism
 - 5.13.1 Parabola
 - 5.13.2 Hyperbola
 - 5.13.3 Cycloid
 - 5.13.4 Involute
 - 5.13.5 Archimedean spiral
 - 5.13.6 Ladder movement, crank and slider-single point, helix and coil

- 5.14 Freehand sketches
 - 5.14.1 Purpose
 - 5.14.2 Proportions
 - 5.14.3 Straight lines
 - 5.14.4 Curved lines
 - 5.14.5 Pictorial sketches
 - 5.14.6 Dimensioning
 - 5.14.7 Introduction to dimensioning
 - 5.14.8 Rules
 - 5.14.9 Types
 - 5.14.10 Forms
 - 5.14.11 Common features
- 5.15 Sectioning
 - 5.15.1 Introduction to sectioning
 - 5.15.2 Rules
 - 5.15.3 Types
 - 5.15.4 Standard symbols
 - 5.15.5 Machine components
- 5.16 Drawing conventions
 - 5.16.1 Introduction to drawing conventions
 - 5.16.2 Representation
- 5.17 Development and interpenetration
 - 5.17.1 Introduction to development and interpenetration
 - 5.17.2 Solid figures of similar diameter
 - 5.17.3 Solid of dissimilar figures
 - 5.17.4 Curves
- 5.18 Limits and Fits
 - 5.18.1 Introduction to limits and fits
 - 5.18.2 Types
 - 5.18.3 Fits
 - 5.18.4 Application

- 5.19 Symbol, abbreviations and terminologies in machine drawing
- 5.19.1 Introduction to symbol abbreviations and terminologies in machine drawing
- 5.19.2 Types and purpose
- 5.19.3 Standard symbols and abbreviations
- 5.20 Joints
- 5.20.1 Introduction to joints
- 5.20.2 Types
- 5.20.3 Uses
- 5.20.4 Working drawing
- 5.20.5 Introduction to working drawing
- 5.20.6 Types
- 5.20.7 Detail drawing
- 5.21 Assembly drawing
- 5.21.1 Introduction to Assembly drawing
- 5.21.2 Types
- 5.21.3 Uses

097 Mechanical Draughting Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Draughting office/room and equipment							1	5.7
2	Conventional features and shape in machine-drawing							1	5.5
3	Symbols, abbreviations and terminologies in machine-							1	5.5

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
	drawings								
4	Joints, limits, fits and tolerances							1	5.7
5	Similar figures and equal area							1	5.4
6	Loci and locus of mechanism							1	5.4
7	Geometric constructions in plane geometry							1	6.5
8	Pictorial drawing and Orthographic projection							1	13.6
9	Auxiliary views and blending of lines and curves							1	6.7
10	Development and interpenetrations/ intersections							1	5.8
11	Sections, working details and assembly drawing							1	13.9
12	Scales and dimensioning							1	4.9
13	Lines and lettering							1	5.1
14	Freehand sketching							1	5.1
15	Standard ISO and drawing sheet							1	5.2
Total Number of Items								15	
Total Percentage Weight									100

098 FOUNDRY AND BLACKSMITH

(For Both School and Private Candidates)

1.0 INTRODUCTION

This examination format is a revised version of the 2008 format which was issued by the National Examinations Council of Tanzania (NECTA). The format is based on the 1994 Foundry and Blacksmith syllabus for Ordinary Level of Secondary Education. It emphasises on the application of the competence-based assessment approach. Despite the revisions made in the format, there is no change in the examination content.

2.0 GENERAL OBJECTIVES

The examination intends to assess the extent to which the candidates are able to:

- 2.1 select and use various tools, plants and equipment in both foundry and blacksmith;
- 2.2 prepare moulds using various methods of moulding;
- 2.3 perform casting of various metal shapes;
- 2.4 prepare patterns using suitable materials;
- 2.5 perform finishing processes on castings and forged components; and
- 2.6 forge various shapes of metals.

3.0 GENERAL COMPETENCES

The examination will test candidates' ability to:

- 3.1 identify various tools used in foundry and blacksmith;
- 3.2 explain moulding techniques;
- 3.3 describe tools and equipment used in moulding processes;
- 3.4 describe the features of equipment used in foundry and blacksmith;
- 3.5 classify patterns and their features;
- 3.6 mould various shapes of casting using various moulding methods;
- 3.7 select suitable binders to a chosen moulding method;
- 3.8 describe various forging methods;
- 3.9 describe various casting methods;
- 3.10 carry inspection and quality control;
- 3.11 choose correct methods of melting and pouring; and
- 3.12 select the casting method according to type of material to be casted.

4.0 EXAMINATION RUBRIC

There will be **one (1)** examination paper of **three (3)** hours. The paper will consist of sections A, B and C with a total of **14** questions. Candidates will be required to answer **13** questions which will weigh **100** marks.

Section A will consist of **one (1)** multiple-choice question with **10** items, each weighing **one (1)** mark, making a total of **10** marks in this section. Candidates will be required to respond to **all** the questions.

Section B will consist of **nine (9)** short answer questions, each weighing **five (5)** marks making a total of **45** marks in this section. Candidates will be required to answer all the questions.

Section C will comprise **four (4)** structured questions, each weighing **15** marks. Candidates will be required to attempt **three (3)** questions, making a total of **45** marks in this section.

5.0 EXAMINATION CONTENT

The candidates will be tested on the following topics:

- 5.1 Safety precautions and regulations
- 5.2 Forging tools and equipment
- 5.3 Foundry tools and equipment
- 5.4 Foundry and blacksmith processes
- 5.5 Patterns and pattern making
- 5.6 Core and core making
- 5.7 Binders
- 5.8 Parting materials
- 5.9 Forging
- 5.10 Hand moulding
- 5.11 Machine moulding
- 5.12 Moulding defects
- 5.13 Melting
- 5.14 Pouring
- 5.15 Gating and risering systems
- 5.16 Solidification
- 5.17 Die casting
- 5.18 Finishing operations
- 5.19 Inspection and quality control

098 Foundries and Blacksmith Table of Specification

S/N	Topics	Cognitive Levels to be Tested						Number of Items	Percentage Weight per Topic
		Remembering	Understanding	Applying	Analysing	Evaluating	Creating		
1	Safety precautions and regulations							1	6.52
2	Forging tools and equipment							1	4.35
3	Foundry tools and equipment							1	4.35
4	Foundry and blacksmith processes							3	13.04
5	Patterns and pattern making							1	4.35
6	Core and core making							1	4.35
7	Binders							1	2.17
8	Parting materials							1	2.17
9	Forging							1	2.17
10	Hand moulding							1	2.17
11	Machine moulding							1	2.17
12	Moulding defects							1	2.17
13	Melting							1	2.17
14	Pouring							2	10.87
15	Gating and risering systems							1	6.52
16	Solidification							1	8.69
17	Die casting							1	4.35
18	Finishing operations							1	6.52
19	Inspection and quality control							2	10.87
Total Number of Items								23	
Total Percentage Weight									100

Appendix 1

A SUMMARY OF COGNITIVE DIMENSIONS ASSESSED IN THE FINAL EXAMINATIONS

Cognitive Levels Assessed	How to Measure	Sample of Action Verbs Used			
Remembering	Students' ability to recall, retrieve or recognise information, ideas, facts and principles in the approximate form in which they learned them.	define describe recognise relate recall select	identify, label list, match , memorise, name, which	duplicate outline reproduce what where when	who
Understanding	Students' ability to translate, comprehend or interpret information, facts or ideas based on prior learning.	explain summarise paraphrase describe illustrate identify	convert exemplify demonstrate restate estimate	extend rephrase translate indicate show	rewrite
Applying	Students' ability to select, transfer, use data, ideas, facts and	use compute solve apply construct relate manipulate	apply change compute illustrate employ examine	complete imitate articulate practice instruct	interpret

Cognitive Levels Assessed	How to Measure	Sample of Action Verbs Used			
	principles to complete a problem or task in a new situation with minimum direction.				
Analysing	Students' ability to distinguish , classify, and relate the assumption s, hypotheses , evidence, or structure of a statement or question	analyse categorise compare contrast separate prepare	discriminate compute classify divide simplify apply	modify operate relate organise arrange inspect	manipulate
Evaluating	Students' ability to appraise, assess, or critique an idea or fact on a basis of specific standards and criteria.	judge infer dispute recommend critique justify	assess conclude argue evaluate defend estimate	interpret tell discuss reframe predict rate	rank support appraise relate prioritise
	Students'	create	collect	plan	rearrange

Cognitive Levels Assessed	How to Measure	Sample of Action Verbs Used			
Creating	ability to compose, design, assemble, and combine ideas into a whole product, plan or idea that is new to him or her.	design hypothesise invent develop revise prepare discover	combine compose construct arrange assemble devise formulate	rewrite set up suppose imagine synthesise change generate	reconstruct relate propose integrate express compile reorganise

Note: The interrogatives “*How*” and “*Why*” can be used to assess all the levels depending on the qualifiers used in the stem of the question.

THE EXTREMELY VAGUE ACTION VERBS OR PHRASES WHICH SHOULD BE AVOIDED

Words to Avoid where Necessary	Phrases to Avoid where Necessary
• Believe • Hear • Realise • Capacity • Intelligence • Recognise • Comprehend • Know • See • Feel • Conceptualise • Listen • Memorise • Self-Actualise • Think • Experience • Perceive • Understand	• Show your appreciation for • How acquainted are you with • How are you adjusted to • Show your awareness of • Comprehension of • Cognisant of • Enjoyment of • How conscious are you of • How familiar are you with • Indicate your interest in • Show your knowledge of • How knowledgeable are you about • Indicate your understanding of • Write short notes.

**JAMUHURI YA MUUNGANO WA TANZANIA
WIZARA YA ELIMU NA MAFUNZO YA UFUNDI**

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Unapojibu tafadhali taja:



S. L. P. 9121,
DAR ES SALAAM.

Kumb.Na. ED/OK/C.2/4N/1

Tarehe: 01/04/2006

Makatibu Tawala wa Mikoa
Wakaguzi Wakuu wa Shule wa Kanda
Wakuu wa Shule za Sekondari
Wakuu wa Vyuo vya Ualimu
Mkurugenzi Taasisi ya Elimu Tanzania
Katibu Mtendaji Baraza la Mitihani Tanzania
Mkurugenzi Taasisi ya Elimu ya Watu Wazima
TANZANIA BARA

**WARAKA WA ELIMU NA. 1 WA MWAKA 2006
MAREKEBISHO YA MTAALA WA ELIMU YA SEKONDARI**

Waraka wa Elimu Na. 9 wa Mwaka 2004 ulitoa maelezo ya mabadiliko ya masomo katika Shule za Sekondari. Katika mabadiliko hayo, masomo ya Physics na Chemistry yaliunganishwa na kuwa somo moja la "Physics with Chemistry". Aidha, masomo ya michepuo ya Biashara, Kilimo, Ufundi na Sayansi Kimu yaliondolewa katika orodha ya masomo yanayofundishwa Sekondari.

Baada ya Wizara kutangaza mabadiliko hayo, baadhi ya wadau walionesha kutoridhika na uamuzi wa kuondolewa kwa masomo ya michepuo ya Biashara, Kilimo, Ufundi na Sayansi Kimu katika mtaala wa Elimu ya Sekondari na kutaka masomo ya michepuo yaendeleo kufundishwa. Vile vile imeonekana kufundisha masomo ya Physics na Chemistry kama somo moja la "Physics with Chemistry" kusingetoa maarifa ya kutosheleza.

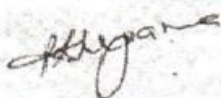
Kwa misingi hiyo imeonekana kuna haja kwa Serikali kuangalia ubora wa Elimu ya Sekondari kwa kuzingatia soko huria, dunia ya utandawazi, Mahitaji ya Sayansi na Teknolojia, Falsafa ya Elimu ya Kujitegemea, ajira katika sekta binafsi na sekta isiyo rasmi, mahitaji ya matakwa ya jamii kwa wakati huu na kuhisha masomo ya taaluma na mafunzo ya Ufundi. Aidha, Serikali pia imezingatia kuweka msingi bora wa taaluma unaunganisha kwa ufanisi zaidi masomo kuanzia ngazi ya Elimu ya Msingi, Sekondari na Elimu ya Juu ili kuweza kupata wataalamu walioboea.

Kwa hiyo, Serikali imeamua kufanya marekebisho ya Waraka wa Elimu Na. 9 wa Mwaka 2004. Somo la "Physics with Chemistry" sasa litafundishwa kama masomo mawili tofauti yaani, somo la Physics na somo la Chemistry kwa kutumia mihtasari ya mwaka 1997 kuanzia Aprili 2006 kwa wanafunzi wa kidato cha I na kidato cha II.

Masomo mengine yataendelea kufundishwa kwa kutumia mihtasari ya mwaka 2005. Aidha, masomo ya michepuo ya Biashara, Kilimo, Ufundi na Sayansi Kimu yanarudishwa na kufundishwa kwa kutumia mihtasari ya masomo hayo iliyotolewa mwaka 1997. Masomo hayo ya michepuo yataanza kufundishwa kwa wanafunzi wa kidato cha I kuanzia Aprili 2006. Kwa Misingi hiyo, wanafunzi wa kidato cha I na II watasoma masomo 9 ya msingi (Mathematics, English, Kiswahili, Biology, Civics, Physics, Chemistry, Geography na History) pamoja na masomo ya michepuo ya Shule hiyo na somo moja la uchaguzi wake (ambalo ni hiari kuchagua). Wanafunzi wa kidato cha III na IV watawajibika kusoma masomo 7 ya msingi na ya lazima (Mathematics, English, Kiswahili, History, Geography, Biology, na Civics). Wanafunzi watakachagua mkondo wa Sayansi, pamoja na kusoma masomo 7 ya msingi, watalazimika kusoma Physics na Chemistry, pamoja na masomo ya michepuo ya shule husika na somo moja la hiari. Aidha, wanafunzi watakosoma mkondo wa Sayansi Jamii, pamoja na masomo 7 ya msingi watalazimika kusoma masomo ya michepuo iliyopo shuleni. Vile vile mwanafunzi ana hiari ya kuchagua somo moja chaguzi. Wanafunzi wa kidato cha II 2006 wataendelea na masomo wanayosoma kwa kutumia mihtasari ya mwaka 2005 hadi wamalize kidato cha IV.

Kiambatisho Na. 1 kinaonesha masomo yatakayofundishwa kidato cha I – IV pamoja na idadi ya vipindi kwa kila somo kwa wiki. Kiambatisho Na. 2 kinaonesha masomo ya hiari Kidato I – IV na idadi ya vipindi kwa kila somo kwa wiki. Masomo katika makundi ya Sayansi na Sayansi Jamii yameoneshwa katika kiambatisho Na.3. Wanafunzi wa kidato cha V na VI watasoma mojawapo ya maunganisho ya masomo kama yalivyooneshwa katika kiambatisho Na. 4. Maunganisho ya masomo yataundwa kufuatana na mahitaji na kwa kibali cha Afisa Elimu Kiongozi. Aidha masomo ya michepuo na idadi ya vipindi kwa kila somo, yameoneshwa katika kiambatisho Na. 5.

Waraka huu unaaanza kutumika tarehe 1 Aprili 2006 na unafuta Waraka wa Elimu Na. 9 wa Mwaka 2004.


- R.A. Mpama
AFISA ELIMU KIONGOZI

**Nakala: Maafisa Elimu Mkoa
TANZANIA BARA**

“ **Maafisa Elimu Wilaya
TANZANIA BARA**

“ **Wakaguzi Wakuu wa Shule wa Wilaya
TANZANIA BARA**

Kiambatisho Na. 2**MASOMO YA HIARI KIDATO CHA I – IV IDADI YA VIPINDI KWA WIKI**

NA.	SOMO	IDADI YA VIPINDI KWA WIKI
1	ADDITIONAL MATHEMATICS	2
2	ARABIC	2
3	BIBLE KNOWLEDGE	2
4	FINE ART	2
5	FRENCH	2
6	INFORMATION AND COMPUTER STUDIES	2
7	ISLAMIC STUDIES	2
8	MUSIC	2
9	PHYSICAL EDUCATION	2
10	THEATRE ARTS	2

Kiambatisho Na. 3**MGAWANYO WA MASOMO KATIKA MAKUNDI YA SAYANSI NA
SAYANSI JAMII**

KUNDI LA SAYANSI		KUNDI LA SAYANSI JAMII	
1.	MATHEMATICS	1.	MATHEMATICS
2.	ENGLISH	2.	ENGLISH
3.	KISWAHILI	3.	KISWAHILI
4.	BIOLOGY	4.	BIOLOGY
5.	CIVICS	5.	CIVICS
6.	GEOGRAPHY	6.	GEOGRAPHY
7.	HISTORY	7.	HISTORY
8.	PHYSICS	8.	BIAS SUBJECTS (S)
9.	CHEMISTRY	9.	RELIGION
10.	BIAS SUBJECTS (S)	10.	OPTION
11.	RELIGION		
12.	OPTION		

Kiambatisho Na. 4

**MASOMO YATAKAYOFUNDISHWA NA MAUNGANISHO YA
MASOMO KWA KIDATO CHA V - VI**

NA	MASOMO	IDADI YA VIPINDI KWA WIKI	NA	MUUNGANISHO WA MASOMO
1.	MATHEMATICS	10	1.	HISTORY, GEOGRAPHY, ECONOMICS (HGE)
2.	PHYSICS	10	2.	HISTORY, GEOGRAPHY, ENGLISH (HGL)
3.	CHEMISTRY	10	3.	HISTORY, GEOGRAPHY, KISWAHILI (HGK)
4.	BIOLOGY	10	4.	HISTORY, KISWAHILI, ENGLISH (HKL)
5.	ENGLISH	10	5.	HISTORY, ENGLISH, FRENCH (KLF)
6.	KISWAHILI	10	6.	ECONOMICS, GEOGRAPHY, MATHEMATICS (EGM)
7.	HISTORY	10	7.	PHYSICS, CHEMISTRY, MATHEMATICS (PCM)
8.	GEOGRAPHY	10	8.	PHYSICS, CHEMISTRY, BIOLOGY (PCB)
9.	ECONOMICS	10	9.	CHEMISTRY, BIOLOGY, GEOGRAPHY (CBG)
10.	DIVINITY	10	10.	PHYSICS, GEOGRAPHY, MATHEMATICS (PGM)
11.	ISLAMIC STUDIES	10	11.	ECONOMICS, COMMERCE, ACCOUNTS (ECA)
12.	FRENCH	10	12.	CHEMISTRY, BIOLOGY, AGRICULTURAL SCIENCES (CBA)
13.	ARABIC	10	13.	CHEMISTRY, BIOLOGY, NUTRITION (CBN)
14.	INFORMATION AND COMPUTER STUDIES	10		
15.	HOME ECONOMICS	10		
16.	MUSIC	10		

17.	FINE ART	10
18.	PHYSICAL EDUCATION	10
19.	BASIC APPLIED MATHEMATICS	4
20.	GENERAL STUDIES	4
21.	ENGLISH USAGE	4
22.	RELIGION	2

Kiambatisho Na. 5

MASOMO YA MICHEPUO

NA.	MCHEPUO	MASOMO	VIPINDI KIDATO CHA I NA II	VIPINDI KIDATO CHA III NA IV
1.	KILIMO	AGRICULTURAL SCIENCE	6	6
2.	BIASHARA	• COMMERCE • BOOKKEEPING	3 3	3 3
3.	SAYANSI KIMU	• FOOD AND NUTRITION • CLOTH AND TEXTILES	3 3	3 3
4.	UFUNDI	• ENGINEERING SCIENCE • TECHNICAL DRAWING • CIVIL ENGINEERING/ ELECTRICAL ENGINEERING/ MECHANICAL ENGINEERING	3 3 4	3 3

