FOREWORD

The Botswana Examinations Council is pleased to authorise the publication of the revised assessment procedures for the Junior Certificate Examination programme. According to the Revised National Policy on Education, the main intentions of the three year Junior Secondary programme are to provide the learners with opportunities for pre-vocational preparation and to enable the learners to take advantage of further education and training. These goals are reflected in the current Junior Secondary curriculum and accordingly, were taken into account when the assessment procedures were revised.

The range of ability of the learners has also influenced the design and revision of the assessment procedures. As a result of the ten year basic education policy, the ability range of the learners in Junior Secondary schools is much greater than previously. The revised assessment procedures are designed to ensure that all learners, regardless of their ability, have the opportunity of demonstrating what they know, understand and can do.

Another important aspect of assessment meant to be fostered through this revision is the alignment of assessment with the specific requirements of the teaching programme. This has been addressed through the restructuring of the scheme of assessment for individual subjects, whilst ensuring the reliability of the outcomes. The revised procedures use a standardised format across all subjects, whilst meeting the specific requirements of each subject.

The revised procedures are not intended to replace the existing teaching syllabuses. Rather, they provide a specification of the knowledge and skills which are to be assessed in each subject. Through the scheme of assessment, the procedures provide information on: the number of question papers in each subject, the marks allocated to each paper, paper and section weightings, etc.

These procedures are the outcome of the efforts of many professionals in the education system, and I wish to extend my thanks to all those who made their contribution. I would also like to encourage a continuation of this valuable collaboration.

Executive Secretary

1. INTRODUCTION

As part of the Botswana Junior Secondary Education Programme, the Agriculture Assessment Procedures are designed to provide a framework for assessing candidates who have completed a three-year course based on the Junior Secondary Agriculture Teaching Syllabus.

The Agriculture examination aims to assess the knowledge and skills acquired through instruction in the content prescribed for the Junior Secondary Agriculture programme. The assessment will be designed in a way that encourages candidates to show what they know and can do, and their level of understanding. Furthermore, the procedures offer a general framework for syllabus content representation in examination papers and assure comparability of sampled content from year to year.

The outcome of instruction in the content prescribed by the Agriculture Teaching Syllabus will be assessed through **four** papers.

2. DIMENSIONS

For purposes of assessment, the behavioural outcomes of instruction in the prescribed content have been classified into three broad skill areas called dimensions. Brief descriptions of the dimensions are given below.

Dimension 1: Knowledge and Understanding

Candidates will be assessed on their ability to recall and understand:

- terms, quantities and units of measurements;
- correct reference to facts, concepts and principles;
- agricultural scientific concepts;
- Agricultural Science terminology;
- environment and the need for sustaining natural resources.

Dimension 2: Application

Candidates will be assessed on their ability to:

- make and record observations, measurements and estimates;
- use quantities and units of measurements;
- use equipment and materials correctly and safely;
- use procedures and production methodologies;
- use computational skills in solving real life problems;
- use practical skills in the growing of crops and the rearing of animals;
- use appropriate Agricultural Science terminology.

Dimension 3: Solving Problems and Evaluation

Candidates will be assessed on their ability to:

- demonstrate critical thinking, initiative and positive interpersonal skills;
- plan, implement and manage their projects;
- evaluate methods and procedures and suggest improvements.

3. STRUCTURE OF THE EXAMINATION

The syllabus is assessed by four papers. Subject grades will be reported on a five-point scale of **A** to **E**.

Paper 1	**Multiple-Choice**	**Marks**	**40**
Time	**1 Hour**	**Weighting**	**20%**

This is a forty-item multiple-choice paper assessing knowledge of facts, understanding and application of Agricultural skills.

Paper 2	**Short-Answer and Structured**	**Marks**	**100**
Time	**1 Hour 30 Minutes**	**Weighting**	**40%**

This will be a written paper assessing knowledge and understanding of Agricultural concepts as well as the application of Agricultural scientific principles and procedures.

There will be two sections in this paper. Section A will present short-answer questions from the core, worth 70 marks. Candidates must attempt **all** questions in this section.

Section B will present six short-answer questions from the optional units and each question is worth 10 marks. Candidates are required to answer one question from each of the options. The options are as follows:

Option 1: Bee keeping or Fish Farming
Option 2: Goat production or Sheep production
Option 3: Pig production or Rabbit production

Paper 3	**Vegetable Production Practical**	**Marks**	**50**
Time	**12 weeks**	**Weighting**	**25%**

This will be a practical paper assessing application of practical skills in vegetable production.

Candidates are required to present two plots of two different groups of vegetables from any two classes as per the teaching syllabus. Assessment of practical work will comprise the following:

Plot Stand: The plot stand will be assessed for layout, cleanliness, population and condition of the crop and will be worth 40 marks.

Card: The card will be assessed for correct entry of the work completed, correct reasons for activities carried out, timely recording of important activities, logical presentation of the work done and neatness of the record. It will be worth 10 marks.

Paper 4	**Project Assessment**	**Marks**	**40**
Time	**5 Terms**	**Weighting**	**15%**

This will cover assessment done at school level throughout the 5 terms. Teachers should assess pupils as they carry out various activities throughout the three years. The paper will focus on the assessment of practical skills in six areas as follows:

1. Poultry Production
2. Field Trees Production
3. Forestry Production
4. Goats or Sheep Production
5. Bees or Fish farming
6. Rabbits or Pigs

4. ASSESSMENT GRID

The table below shows percentage representation of the examined major content areas by paper.

COMPONENT	CONTENT AREAS					TOTAL
	General Agriculture	Crop Production	Animal Production	Agriculture Economics	Agriculture Engineering	
PAPER 1	10%	40%	40%	2%	8%	**100%**
PAPER 2	10%	40%	40%	5%	5%	**100%**

5. WEIGHTING OF PAPERS BY DIMESION

The table below shows percentage representation of dimensions by paper.

COMPONENT	DIMENSIONS			TOTAL
	Knowledge and Understanding	Application	Solving Problems And Evaluation	
PAPER 1	15%	5%	–	**20%**
PAPER 2	25%	10%	5%	**40%**
PAPER 3	–	15%	10%	**25%**
PAPER 4	–	10%	5%	**15%**
TOTAL	**40%**	**40%**	**20%**	**100%**

6. CONTINUOUS ASSESSMENT

This is school-based assessment administered by teachers throughout the three years to determine the performance of pupils on a variety of practical skills and will be done through papers 3 and 4. Paper 3 is both a process and a product assessment while paper 4 is a process assessment.

7. GRADE DESCRIPTIONS

Grade descriptions are provided to give a general indication of the skill acquisition expected of candidates for the award of particular grades.

Grade A

The candidate should be able to:

- use scientific vocabulary; recall a wide range of agricultural concepts, facts, principles and theories;
- relate a wide range of scientific concepts to agricultural principles and theories and recognize scientific relationships;
- apply scientific knowledge and understanding, identify patterns, report trends from given information and draw appropriate conclusions and give recommendations to new situations;
- translate information from one form to another: process information from graphs, tables and charts; represent information in the form of graphs, tables and charts with ease;
- use appropriate equipment, techniques and chemicals safely and correctly; follow given instructions to perform an experiment involving a series of steps;
- make accurate observations, decide the level of precision needed in measurements and record experimental data; process data, make conclusions and generalizations where appropriate with ease and identify anomalous observations.

Grade C

The candidate should be able to:

- use scientific vocabulary, recall a wide range of agricultural concepts, facts, principles and theories with some assistance;
- relate scientific concepts to agricultural principles and theories and recognize scientific relationships with some assistance;
- apply scientific knowledge and understanding, identify patterns, report trends from given information, draw conclusions and give recommendations to simple situations;
- translate information from one form to another: process information from graphs, tables and charts; represent information in the form of graphs, tables and charts with some assistance;
- use appropriate apparatus, and techniques safely and correctly, follow given instructions to perform and experiment involving a few steps;

- make accurate observations, measurements and record experimental data; process data, make conclusions and generalizations where appropriate with some assistance, recognize when it is necessary to repeat observations and measurements.

Grade D

The candidates should be able to:

- use scientific vocabulary, recall basic agricultural concepts, principles and theories with assistance all the way;
- relate basic agricultural concepts to scientific principles and theories and recognize scientific relationships with assistance all the way;
- apply basic scientific knowledge and understanding, identify patterns, report trends from given information and draw conclusions and give recommendations to familiar situations with assistance all the way;
- translate information from one form to another: process information from graphs, tables and charts; represent information in the form of graphs, tables and charts with assistance all the way;
- use familiar apparatus, and simple techniques safely and correctly, follow given instructions to perform an experiment involving one step with assistance all the way;
- make simple observations, measurements and record experimental data, process data, make conclusions and generalizations where appropriate with assistance all the way.