



## CHIEF MARKER'S REPORT

<b>SUBJECT:</b>	<b>AGRICULTURAL SCIENCES P2</b>
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### 1. ANALYSIS OF QUESTION BY QUESTION PERFORMANCE

#### QUESTION 1

This question covers LO 1, 2, 3 and 4.

This question was set to test the recall of knowledge, application and relating terms or concepts to the descriptions in the short question such as multiple choice, one word, matching type and true or false.

1.1

1.1.1 The performance of learners was generally good as most learners managed to score 8 marks and above, very few candidates got less than 6 marks. Marks range from four to eighteen marks.

Question 1.1.4 demanded a lot of interpretation from candidates for only two marks

1.2 The performance of learners was impressive as most learners were able to get between 8 and 10 marks very few obtained less than 6 marks

1.3 This was the most difficult question for learners in this section, because the range was from 0 to 6 out of 10 marks with the majority obtaining 2 marks.

Question 1.3.1 was interpreted wrongly by most candidates as they gave planning or mission as a response, most learners did not get 1.3.2 correctly and this requires educators to address the concepts involved in the marketing processes.

Question 1.3.3 was answered well by the most candidates

Question 1.3.4 was answered incorrectly by most learners as they could not relate the question to variation. Other learners gave discontinuous variation as the answer. This calls for educators to explain the difference between continuous and discontinuous variation.

1.3.5 was answered correctly by most learners but some learners gave incomplete dominance and co-dominance as a response and yet the question requires complete dominance. The educators need to explain the difference between the three terms or concepts.

1.4 Generally candidates did not perform well as the range is between zero to three marks out of five, with the average performance of one. The two marks obtained by learners was drawn from question 1.4.3 and 1.4.4

1.4.1 was avoided by most learners, some were giving planning as a response.

1.4.2 was wrongly answered by most learners. Learners did not know the concepts required. Educators need to explain the difference between grading and standardization as these are related concepts, but not meaning the same thing as may be perceived.

1.4.3 was answered well by most candidates.



- 1.4.4 was well answered by most candidates, the learners were able to distinguish between seasonal and casual labourers as forms of temporal workers.
- 1.4.5 the concept prepotency was not known by most learners. The learners could not relate the statement to prepotenc
- Question 1.3 and 1.4 are the most difficult questions in this section and have dropped the expected performance on the whole section. On the average learners got 20 marks out of 45 marks. The marks range from 8 to 37 marks out of 45 marks. This is a section where learners are expected to get more marks as the section is based on concepts and terminology

## QUESTION 2

The question covers LO1 and LO2

- 2.1 The question was assessing learners on reading and comprehension skills.
- 2.1.1 approximately 40% of learners managed to get full marks on this question. Some learners were unable to answer correctly. This shows that the concept of free marketing is still a challenge to our learners. Learners were giving channels of marketing instead of advantages as the question requires. Some were giving responses directly from the case study which were irrelevant to the question, Educators have a challenge of addressing marketing in details.
- Question 2.1.2 Learners could not answer this question correctly because the question required critical thinking and problem solving skills. It was evident that these skills are lacking in most of our learners. Educators need to set more classroom activities that will help in developing these skills.
- 2.1.3 It was well answered by most learners although some learners were giving management skills as a response and yet the question was asking learners to mention the skills that the manager/entrepreneur should have to ensure success in the business. The concept of entrepreneur and manager should be addressed adequately as learners perceive them as separate concepts.
- 2.2.1 Most learners were able to deduce the month with least demand from the graph.
- 2.2.2 Performance was poor. Learners could not make correct approximation of correct quantities, for example responses given were far above 300 tons. Also learners failed to indicate the appropriate units. This is an indication that they lack interpretation skills of the graphs.
- 2.2.3 Very few learners managed to get full marks on this question or than 80% of candidates got zero on this question. This was a higher order question which demanded critical thinking / reasoning skills as well as situation analysis which is lacking in our learners.
- 2.2.4 This question is a simple and a straight forward question which requires only the recall of knowledge, but very few obtained the full marks. The reason could be that some of the textbooks do not detail these factors and this might have resulted in a lack of content on the part of the learners.
- 2.3 The question assessed learners on data analysis, interpretation, drawing of conclusion and the drawing skills.



- 2.3.1 On the average most learners obtained 2 marks out of 4 in this question. It was evident that they could not deal with more than one variable. Some learners could not draw a line graph and others were drawing three line graphs on the same set of axes, the top line graph was for price and the two bottom graphs were reflecting supply and demand. Determination of independent and independent variables and their placement in the correct axes is a major challenge for most learners. This calls for educators not to limit learners to only two variables and must constantly give learners classroom activities based on graphs.
- 2.3.2 Although +- 40% candidates managed to get the full marks, but some failed to pick up the correct answers from the data given.
- 2.3.3 This is higher order question which was demanding reasoning skills and as such was very difficult for the learners to comprehend. More than 80% of the learners obtained zero in this question and even high performers could not give the correct answer.
- 2.4 The question assessed learners on data analysis, problem solving and comprehension.
- 2.4.1 The majority of learners were able to calculate the totals for income and expenditure, but failed to calculate the profit as more than 40% were deducting income from expenditure. With farmer B learners failed to indicate a net profit as a negative figure.
- 2.4.2 Most learners were able to give the correct response although others failed to justify the reason for their choice and as such got one mark. Some gave answers without showing the step and as a result they lost marks.
- 2.4.3 More than 50% learners failed to give correct response to this question although answers are provided, hence the poor performance.

### **QUESTION 3**

- 3.1.1 This question required learners to draw answers from the scenario but most learners were writing production factors (Land, Capital and Labour) as responses. Most learners were able to get 3 marks out of 4 marks. All learners did not get marketing as the factor number four.
- 3.1.2 This question was poorly done by most candidates. They could not figure out the management principle to which the question was referring to. Educators need to address the management principles and their implications.
- 3.1.3 The performance in this question was poor. For those learners who were able to score obtained one out of two marks, and were very few. Candidates lack understanding of the external influences/factors that affect farming. Some were mentioning internal factors instead. Although this was a low order question, but it required reasoning and application of knowledge. The question was not directly linked to the passage, but most learners draw responses from scenario given.
- 3.1.4 Although this seems to be popular question the performance was not up to the expected level as only less than 30% managed to obtain maximum mark (3). This could be attributed to the lack of content in certain textbooks or use of single textbooks by educators when preparing their lessons or lack of preparation on the part of learners.

- 3.2 This question was addressing LO4 (interrelated issues) which does not get much attention from both educators and learners hence all the questions based on legislation were poorly answered or in some cases avoided by a number of learners. This question assessed reading skills and comprehension skills as most required answers drawn from the passage.
- 3.1 Most learners were able to identify a scheme from a scenario and were able to score full marks.
- 3.3.2 Performance was good because answers were drawn from the scenario.
- 3.2.3 This question was not answered correctly by most learners. Learners failed to draw conclusions from the scenario in order to answer this question.
- 3.2.4 and 3.2.6 The expected responses on these questions were incorrect, the reason being that learners are lacking knowledge and understanding of the labour legislation. They could not apply the relevant acts to the scenario. Some could not write the acts correctly.
- 3.2.5 This question was also one of the popular questions because answers were drawn directly from the scenario, hence the performance was good, however some lost valuable marks, because they mentioned any skills although the question was limiting them to skills in the scenario. This is a clear indication of the lack of understanding of the question by learners or they might not have read the question up to the end.
- 3.2.7 Some learners identified the type of labourers, but failed to give the correct justification. Others got it all wrong, although the scenario explained the type of work e.g. reference to the first paragraph of the scenario “Farm workers who have lived on the Bosmans’ farm for eight generations” This statement was leading them to the correct answer.
- 3.3 The question was assessing values, skills and attitudes and is addressing LO4.
- 3.3.1 Scoring was a challenge for all learners as no learner obtained full marks in this question. Other learners did not score but only wrote the characteristics for each candidate. These were learners that were confused by the question, and this question is the first of its kind.
- 3.3.2 More than 50% learners were able to identify the required candidate, but could not pick the correct characteristics for each candidate to justify their choice. This question was assessing whether the learner could compare the two candidates, based on the skills given and as such the question was a higher order question which demanded application of knowledge.
- 3.3.3 The question was poorly answered. The majority of learners could not identify a candidate that would not be suitable to work in the workshop on the farm. They were unable to use the given information to identify the candidate hence they were unable to justify their choice in question 3.3.2.
- 3.4 The question is on the analysis of diagram and the application of knowledge. It seeks to link the diagram to the production factor capital.
- 3.4.1 The question was poorly answered reason being that learners failed to identify the specific problems sought by the question viz scarcity of capital and high interest rates. The responses given included overcapitalization, high risk, which is general problems of capital. Loan was the key word, that was restricting them to any of the two responses.

- 3.4.2 Most learners were able to identify the required letter, but to our surprise the large number +/- 40% did not give the expected response, although they were not expected to support their choice. It is a clear indication that they lack understanding on the classification of capital items in real life, especially it also addresses certain values and attitudes.
- 3.4.3 Almost 95% of learners could not give the correct answer to this question. They were unable to think of a reason. They might have been confused by the way the question was phrased and therefore has disadvantaged the learners.

#### **QUESTION 4**

This question covers LO 2, LO 3 and LO 4

- 4.1.1 and 4.1.2 Some learners confused Punnet square with Pearson square while others did not know the difference between gene pairs and gametes, as a result the majority of learners got zero from the question. The question calls for an understanding of the basic concepts in genetics. This causes the learners not to understand the language used in genetics.
- 4.1.3 In this question the learners could not interpret the question as many were giving the advantages of GMO crops, while the question required specific characteristics which enable a maize crop to survive in a particular environment. At the most learners got one mark and the rest got zero mark. Others avoided the question, because of its difficulty. Even high achievers could not score marks in this question.
- 4.2 This question was assessing LO3 which deals with indigenous knowledge and historical development and also addresses certain values and attitudes.
- 4.2.1 Although any responses were accommodated in the memorandum but learners failed to provide reasons for the choice of the breeding. This question included both lower order and higher order cognitive levels. It required the application of knowledge about the advantages of the two breeding systems.  
This could have enabled them to pick up the correct responses from the scenario given.
- 4.2.2 More than 80% were able to pick up the correct answer from the scenario. Those who failed to score marks in this question mentioned the examples of the plant used as medicine instead of picking up the correct response as it is mentioned in the scenario.
- 4.2.3 and 4.2.4 They are both middle order questions requiring reading and comprehension skills as answers were suppose to be picked up from the scenario. Almost 50% candidates managed to score maximum marks.
- 4.3.1 and 4.3.2 Almost 80% of learners did not score marks on these questions. This is a clear indication that learners are having a serious challenge on variation.

- 4.4 Although many alternative responses were given to the question in the marking guideline, but it was evident from the marking that the inaccuracy in the setting of this question detrimentally affected the performance of learners as some candidates  $\pm 40\%$  never attempted this question due to confusion and contradiction it created. Candidates apparently did not understand whether the statement preceding the question was addressing complete dominance or co-dominance or incomplete dominance. The inclusion of incomplete dominance in the passage brought a complete contradiction in the whole question.
- 4.5.1 More than 90% of candidates did not give correct response. The poor performance was due to the fact that it was the first time a cartoon was presented and was therefore an unfamiliar question to candidates
- 4.5.2 Most learners scored marks on this question. They clearly demonstrated the understanding of the benefits of GMOs.

## 7. ANY ADVICE THAT YOU COULD GIVE TO EDUCATORS TO HELP LEARNERS TO REACH THE EXPECTED LEVELS

- The mastering of the concepts and/ or terms for each topic can improve the performance of learners in question 1 i.e. Section A as well as in subsequent questions where these concepts are assessed. Educators are advised to assess these concepts in the form of multiple choice questions, one word question, matching type and incorrect word in their daily classroom activities as teaching, learning and assessment must run concurrently.
- The performance of learners can also be greatly improved if the approach to teaching and learning is in line with the prescribed level of assessment i.e. the content should be taught through data response activities, scenarios, case studies, graphs, cartoons etc. This should also take into account the weighting of the cognitive levels.
- Learners need more practice on questions requiring the drawing, analysis and interpretation of graphs. More emphasis should be paid on determining whether a variable is a dependent or independent one, the axis to place these, the plotting of a graph, labelling of the axes and writing of an appropriate heading. The checklists and/ or rubrics used in the marking guideline could help in this regard.
- Educators should guide their learners on the processing of data whether it is in the form of a table, graph, scenario or case study. Learners should be able to relate this data to the content that they have been taught even before they interact with the questions set on them.
- Teachers need to be taken through a workshop on genetics as this seems to be a grey area not only for the learners but for them too.
- For the performance to improve in question 1, educators are advised to compile a list of concepts for each content topic. These are to be assessed in all controlled tests.
- For learners to understand the language used in the section of basic genetics, they must know and understand the basic concepts, therefore learners should be drilled in these concepts.

- Educators are advised not to limit learners to only two variables . It became evident that learners could not plot a graph with more than two variables. Educators should also assist learners to determine the dependent and independent variable and to place these variables in the correct axes.
- Legislation issues are the challenge for most of our learners in terms of knowing and applying the pieces of legislations in various scenarios. Educators are advised to refer the learners to grade 10 work or content where these pieces of legislation are dealt with in depth. They can give learners assignments or build scenarios out of grade 10 syllabus/content
- Learners could not deal with information presented in the form of a cartoon, therefore educators should give more activities presented in the form of cartoons.
- Learners should be given more activities on interviews , debates and questionnaires especially on the content covering LO3 and LO4.This will enable learners to investigate and gather more information on indigenous knowledge and interrelated issues.
- Educators should try to use as many text books as possible in order to cover the required content. This will assist in preparing learners for examinations.