



“Investing in Africa’s future”

**COLLEGE OF HEALTH, AGRICULTURE AND NATURAL
SCIENCES**

**NAEC 112: COMMUNICATION SKILLS IN AGRICULTURE AND NATURAL
RESOURCES**

END OF SECOND SEMESTER FINAL EXAMINATIONS

MAY 2021

LECTURER: W. MANYANGARIRWA

DURATION: 7 HOURS

INSTRUCTIONS

- a) Choose and Answer **ONE** Question Only.
- b) Read the Question Carefully to find out exactly what is required before Answering.

Question 1

- a) The following story is an account of what transpired in a business meeting at the Annual General Meeting of the Board of Directors of Jequa Enterprises which is based in Manica, Mozambique.

Using your knowledge of how to conduct a properly constituted business meeting, explain the actions that the Chairperson should have taken in order for the meeting to be legitimate, to run smoothly, and to come up with valid outcomes. Kindly note that the Chairperson is the one who directs All the preparations for the meeting as well as Chairing the meeting.

Jequa Enterprises is an Agro-based company that was founded by Elias Simango in the year 2010. Mr Elias Simango is the Managing Director by virtue of being the founder of the company. As the company grew, there was need for a Board of Directors to help in the decision making process after the Company was listed on the Maputo Stock Exchange. Mr Tomaz Salamao was elected as the Chairperson of the Board of Directors of Jequa Enterprises during the Company's Annual General Meeting (AGM) held in Nampula in the third week of June 2015. It is actually a tradition to hold the AGM in the third week of June but for the AGM of 2020, the meeting was held in Chimoio in the third week of December. It was noted that the Company Secretary had invited Mr Josias Simango who is the elder brother to the founder Mr Elias Simango. Mr Josias Simango was actually not a member of the Board of Directors but he was needed at the meeting to help in decision making on important legal matters. The meeting started very well and the agenda had a lot of items that needed to be discussed and yet most of the board members were not in a position to attend the meeting over two consecutive days. During the tea break, one of the Board Members started using threatening language at the Managing Director for having made some unsound decisions in the running of the company. As the meeting went on, some members of the board raised a motion to have the company sell its shares to a Lisbon based business person, Mr Joao Candiero who owns a conglomerate of companies under the trade name of Allianca do Dragao. They were convinced that selling shares to Mr Candiero will bring in the much needed financial capital to boost and expand the activities of the agro based company. Just as the members voted unanimously to have the shares sold to Mr Candiero, the Chairman was informed that Mr Candiero was actually running a number of illegal operations in a number of former Portuguese colonies and that his money was in fact "dirty". In order to save the reputation of Jequa Enterprises, Mr Tomaz Salamao the Chairman had to make a decision. As the Board meeting came to a close, Mr Tomaz Salamao was praised for his skillful handling of the volatile meeting and up to now the company is performing very well.

[40 marks]

- b) With reference to specific examples, discuss the methods used to present different types data sets in scientific papers. [20 marks]
- c) With reference to specific examples from the African rural setting, explain how cultural norms among different groups can be a barrier to effective communication. [20 marks]
- d) “Good Leadership moves hand in hand with Listening”. Using your knowledge of different leadership styles in farming situations, examine the validity of this statement. [20 marks]

Question 2

- a) Examine the importance of electronic communication platforms in Agriculture and the benefits that these have brought to the rural communities. [30 marks]
- b) Language can facilitate effective communication but it can also be a barrier to effective communication. Critically analyse this statement with the use of practical examples. [20 marks]
- c) With reference to specific applied situations, explain the difference between continuous data sets and discrete data sets. [10 marks]
- d) Florence Powell is an Agribusiness student from Liberia studying at Africa University. Her native language is Creole and she also speaks English. She intends to interview farmers in the sugarbean value chain Guruve District, Zimbabwe where the local dialect of Shona is “Chikorekore”. Florence was granted an option of incorporating two other AU students to accompany and assist her in the mission.

Prepare some notes to guide Florence in the preparation and execution of the interviews. [40 marks]

Question 3

Read through the following story which was written by a journalist who is not familiar with scientific writing but managed to capture the correct information from a presentation at the African Crop Science Conference held in Kampala in June 2019 where results of a field trial were being presented.

Using your understanding of scientific writing, write an abridged (shortened) and appropriately titled scientific paper for publication in the African Journal of Agricultural Research. Your paper should have the following components: **A Suitable Title, Names and designation of the authors assuming that you are John Ndugu, A suitable Abstract, a list of 4-5 key words, An Introduction with reference citations, Materials and Methods, Results, A brief Discussion, An Acknowledgement and a list of References.** Much of the material is available from this passage.

[100 marks]

John Ngugu is from the Rift Valley Province of Kenya. He graduated from Egerton University in 2017 with a B.Sc. Honours in Crop Technology. Within a year he was employed as a junior agronomist by the Kenya Agriculture Research Institute (KARI). The KARI Directorate panel that interviewed him was very impressed with his 62 page B.Sc. Honours project entitled “An evaluation of the yield potential of Kirinyaga 15 Potato variety”. In his project, John postulated that Irish potato (*Solanum tuberosum* L.) is an important crop for farmers in the Kenyan highlands and its production needs to be promoted vigorously though addressing soil fertility challenges. He cited soil conditions, particularly pH as a major limitation to Irish potato production in Kenya. His project was so good that it was published in the same year of his graduation by Egerton University Press situated in the city of Nakuru.

Upon being appointed, John was posted to Gilgil Research Station, located at Plot 32, Kariguini road in Gilgil town. The station is a specialized center for Irish potato research. John worked under the mentorship of Prof. Gilbert Kibata. In a 2016 article entitled “The response of Irish Potato to pH variability in Kenya” Prof. Kibata had noted that Irish potatoes respond differently to the pH levels of different soils, under different agro-ecological zones of Kenya. He published this research in the East Africa Journal of Agricultural Research from pages 12 to 17 in volume 12, issue number 2. In a bid to further validate this research, John Ndugu was given an assignment by Prof. Kibata to conduct a field trial at Gilgil Research Station, which is situated about 30 kilometers to the west of Nairobi.

John sent soil samples to the KARI Soils Laboratory in Nairobi and he was informed that the pH of the soil at Gilgil was among the lowest levels in Kenya with a pH level of 5.0. When Prof. Kibata saw the pH results, he suggested to John to conduct an experiment using different levels of lime that had been given to KARI by Nyanza Lime Company (Pvt.) Ltd. The Directors of Rift Valley Seed Company heard about the proposed research and in a bid to promote their new Irish potato variety, Kabete 22, they supplied 10 packets of seed to be used in the trial. Rift Valley Seed Company, claim that their new variety is very tolerant to low pH levels and this is testified from trials conducted at Kisumu, Kericho and Naivasha in 2017 and published in the Seed Potato Journal volume 10 of April of 2018. Apparently this journal is published three times within a year. John Ndugu looked up the research on the internet and found that the author was the seed certification officer James Kamau and the article was on the last four pages of a 115 page journal. The research was entitled “The performance of Kabete 22 potato variety under low pH conditions in Rift Valley and Nyanza”.

When all materials were ready, John Ndugu decided to start the experiment. He was allocated a large plot of almost 40 meters long and 30 meters wide. He marked his plots each one being 5 meters long and 3 meters wide. He applied lime at different levels of; 0 kg/plot, 5 kg/plot, 10 kg/plot and 15 kg/plot. He set up a properly replicated trial. At the end of the trial he found that at 0 kg lime, the number of tubers harvested was 24 per plot and the mean yield per plot was 18 kg. At a liming rate of 5 kg, the new pH was 6.5 with a harvest of 25 tubers and the mean weight was 19 kg per plot. He further noted that at 10 kg of lime, the new pH was 6.8 and the harvest was 29 tubers with a mean weight of 22 kg per plot. At the liming rate of 15 kg, 35 tubers were harvested with a mean weight of 27 kg per plot and the pH had risen to 7.2

When Prof. Kibata looked at the results, he was quite satisfied, but John was rather worried that despite applying large amounts of lime in some of the plots, the rate of increase in pH was low. John later learned from an article in the Journal of Soil Science volume 34, published in 2017 by Crispen Muthaiga and Catherine Wanjuki, that liming brings about a small increase in pH, particularly in volcanic soils of the Rift Valley region of Kenya. The article was extracted from pages 124 to 132 and was entitled “Impact of liming on volcanic soils of Central Kenya and the Rift Valley”.

After John had finished presenting his research results, he was given a standing ovation for an outstanding piece of work. In his response, John paid tribute to the KARI Directorate for the faith they had shown in him by appointing him as a junior research officer. He also paid tribute to Prof. Kibata for being his mentor and that is why he included Prof. Kibata as the second author in his research paper.

END OF EXAMINATION PAPER