



“Investing in Africa’s future”

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

ACP 306: SEED SCIENCE AND TECHNOLOGY

END OF SECOND SEMESTER FINAL EXAMINATIONS

MAY/JUNE 2020

LECTURER: WALTER MANYANGARIRWA

DURATION: 3 HRS

INSTRUCTION

**ANSWER ONE QUESTION ONLY
YOUR ANSWERS SHOULD BE TYPED**

ANSWER ONE QUESTION ONLY

EACH QUESTION IS WORTH 100 MARKS

1. The following data was collected from The Ministry of Agriculture of the DRC. Use the data to answer the questions that follow;

In 2019, Kolwezi Agriculture Corporation imported 250 tonnes of maize seed variety SC 513 from Seed Co. Zimbabwe. In order to reduce the cost of acquiring the seed, the management of Kolwezi Corporation decided that they will import the seed in bulk and they would do the rest of the processing and treatment before marketing the seed. The seed was thus transported in bulk 30 tonne containers. Each container had a tag with the following details: Guaranteed Germination = 95%, Guaranteed Purity= 99 %, Moisture content \approx 12.8 %.

- a) Explain the laboratory equipment, materials, methods and procedures that were used to determine the quality of the maize seed. [50 marks]
 - b) Explain the field certification processes that took place before the seed was exported. [20 marks]
 - c) Develop a Standard Operating Procedures (SOP) Guide on how the seed should be treated, packaged and stored at the Corporation's depot in Kolwezi town. [20 marks]
 - d) Develop a strategy for marketing the seed among the farmers in Kolwezi District. [10 marks]
2. The Minister of Agriculture of the Republic of South Sudan through the Crop Production directorate has noted that crop yields are still low due to among other factors, the poor quality of crop seeds that farmers are using. The Government successfully applied for a grant from the United Nations Development Programme (UNDP) worth some US\$ 100 million (One hundred million United States Dollars only). The country has a low human resource capital in agriculture and hence they awarded you a contract to draw up a Seed Sector Development Plan for the country.

Task required:

Draw up a National Seed Sector Development Strategy Paper on how the Government of the Republic of South Sudan can set up the infrastructure to support a viable, modernized seed industry over a period of 7 to 10 years. In your paper pay attention to the physical infrastructure, the legal framework, the human resource base, the budgeting and other factors that you deem necessary to achieve the set target. [100 marks]

3. The African Union, through its Directorate on Agriculture is planning to ensure that the continent is fully secure in its seed supplies in the next 5 to 10 years. The Agriculture Directorate noted that it is better to approach the issue using regional economic blocks. In this vein, SADC, ECOWAS and the EAC economic blocs were mandated to lead the continent in this initiative.

Task required:

Write a comprehensive strategy paper on approaches that the regional economic blocks can use to achieve the set objective of continental seed security within the next 5 to 10 years. [100 marks]

END OF EXAMINATION PAPER