



“Investing in Africa’s future”
COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES

NACP 211: CROP PHYSIOLOGY

END OF FIRST SEMESTER SUPPLEMENTARY EXAMINATIONS

JANUARY 2021

LECTURER: MTAITA T. A. [Mr.]

DURATION: 24 HRS

INSTRUCTIONS

1. Download the examination paper from MOODLE and work offline.
2. Choose and answer one question.
3. Upload your response on Moodle in PDF format.

Question One

- a) Discuss the concept of yield components and crop yield and indicate clearly how farmers can benefit from such an understanding. [25]
- b) Clearly analyze why there is no one set of characteristics that can be recommended to improve yield in crop plants. [25]
- c) Analyze the major concerns of a crop physiologist in agriculture science. [25]
- d) Identify effects of different stress factors and recommend how to ameliorate them. [25]

Question Two

- a) Discuss why an understanding of stress physiology is key in agriculture science. [25]
- b) Explicitly discuss the processes and attributes governing yield when solar radiation is limiting. [25]
- c) With the aid of different physiological processes, explain why growing a crop is considered to be an exercise in energy transformation. [25]
- d) From the knowledge you gained in crop physiology, recommend with reasons, practices that will ensure maximum yield in crop plants. [25]

Question Three

- a) With the aid of a diagram, shed light on the processes and attributes governing yield when water is limiting. [25]
- b) Using realistic examples, discuss the concept of ideotypes in agriculture science. [25]
- c) As a crop physiologist, identify different growth stages of a crop of your own choice and clearly summarize management practices for each stage with the aim of maximizing yield. [25]
- d) Prepare an organized essay titled: Stress Physiology in Agriculture. [25]

End of Examination Paper