



AFRICA
UNIVERSITY
A United Methodist-Related Institution

"Investing in Africa's Future"

(College of Health, Agriculture and Natural Sciences)

NACP 211: Crop Physiology

END OF FIRST SEMESTER EXAMINATIONS

NOVEMBER/DECEMBER 2021

LECTURER: (Mr. Mtaita T A)

DURATION: (5 HRS)

INSTRUCTIONS

1. Download the Examination Paper and Work offline
2. Answer **One** Question
3. Upload your response in PDF format within the allowed duration

Question One

- a. Provide a detailed discussion on why there is no one set of considerations and no one path to succeed as a crop plant. [30]
- b. Analyze different stresses in agriculture science and recommend strategies for betterment. [40]
- c. Discuss the main concerns of a crop physiologist in agriculture sciences [20]
- d. With the aid of realistic examples, analyze why transpiration is considered as a necessary evil. [10]

Question Two

- a. Separately, analyze the attributes governing yield when solar radiation or water is limiting in any production system. [30]
- b. Discuss why the science of crop production is taken to be an exercise in energy transformation and advise farmers on strategies that they can use to improve solar radiation interception and utilization. [30]
- c. Discuss the physiological basis of fertigation, pruning, *pfumvudza* and intercropping in agriculture sciences [40]

Question Three

- a. With the aid of realistic plant physiology examples, justify why there is no one set of characters and one pathway to succeed as a crop plant [30]
- b. Discuss the roles of a crop physiologist in crop improvement. [30]
- c. Identify growth stages of any cereal and advise the producers on management practices to enhance physiological processes that will ensure maximum growth, development and high yield of acceptable quality. [40]