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ACR 101



**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)
SCHOOL OF AGRICULTURE, VETERINARY SCIENCES AND
TECHNOLOGY (SAVET)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR**

**MAIN EXAMS
OF
BACHELOR OF SCIENCE IN AGRICULTURE, AGRIBUSINESS AND
EXTENSION MANAGEMENT**

COURSE CODE: ACR 101

COURSE TITLE: PLANT PHYSIOLOGY

DATE: 23.04.2024

TIME: 11.30-1.30PM

INSTRUCTIONS TO CANDIDATES

This paper is divided into two sections, **A and B**. Answer ALL Questions in SECTION A and any Two in SECTION B

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over

SECTION A: ANSWER ALL QUESTIONS (30 MARKS)

Q1. Explain the following terms (5mks)

- i) Chlorophyll fluorometry
- ii) Kautsky effect
- iii) Photophosphorylation
- iv) Photorespiration
- v) Osmotic systems

Q2. State five factors that responses of plants to hormones depends on (5mks)

Q3. Describe the first law and second law of thermodynamics in relation to photosynthesis (5mks)

Q4. Briefly describe the process of phloem loading (5mks)

Q5. State the functions of glycolysis (5mks)

Q6. Briefly explain why photorespiration is light dependent (5mks)

SECTION B: (ANSWER ANY TWO QUESTIONS (40 MARKS))

Q7. Describe the experiments which prove that organic molecules are translocated through the anatomy of the phloem tissue in plants (20mks)

Q8. Discuss the C3, C4 and CAM photosynthesis citing specific importance to crop production (20mks)

Q9. Explain the process of respiration in plants and its significance to higher plants (20mks)

Q10. Discuss the site of production and functions of five plant secondary metabolites (20mks)