UGANDA MARTYRS **UNIVERSITY**

NGETTA CAMPUS
FACULTY OF AGRICULTURE

DIPLOMA IN CROP PRODUCTION AND FARM MANEGEMENT

CODE:2108 BOTANY and PLANT PHYSIOLOGY EXAMINATIONS

FINAL ASSESSMENT

ACADEMIC YEAR 2023/2024 SEMESTER ONE

DCPM I

DATE: 7TH/DEC/2023

TIME ALLOWED:3 HOURS (9:00am-12:00pm)

INSTRUCTIONS:

- *Attempt any four questions, **TWO** from each section.*
- *All questions carry equal marks*
- *Start every question on a new page*
- *Do not write anything on the question paper*

Section A

QN 1 a. Define the following (@ 2 Mk):

(i) Seed

(ii) Seed dispersal

b. Briefly, explain how a bean seed is formed (7 Mk)

c. State atleast two (2) botanical functions of seed (4 Mk)

d. With examples, discuss how different seed are dispersed (10 Mk)

QN 2 a. Briefly, explain the following (@ 3 Mk)

(i) Isogamous

(ii) Anisogamous

(iii) Oogamous

b. Name five (5) important plant groups and state two (2) characteristics each (15 Mk)

c. State one (1) relevance of Algae (1 Mk)

QN 3 a. With examples, explain sexual expression as used in plants (9 Mk)

b. Briefly and with examples explain plant categorization by Water Requirement (9 Mk)

QN 4 a. In detail, explain water movement and paths in plants (10 Mk)

b. Briefly, explain the occurrence of the following in plants (@ 3Mk):

(i) Mass flow theory

(ii) Active transport

(iii) Passive transport

c. State three (3) importance of water movement in plants (6 Mk)

Section B

5 a. Define a cell (3 Mk)

b. Name six (6) components of a Tomato cell and state one function of each (12 Mk)

c. State five (5) differences between Eukaryotic and Prokaryotic cells (10 Mk)

QN 6 a. With examples, explain the following (@ 4 Mk):

(i) Hypertonic solution

(ii) Isotonic solution

(iii) Hypotonic solution

b. Explain the mechanisms of water absorption in plants (7 Mk)

c. Briefly, explain three (3) factors that influence water absorption in plants (6 Mk)

QN 7 a. Describe how environmental conditions alter rates of transpiration (15 Mk)

b. Explain how the plant is able to alter rates of transpiration (10 Mk)

QN 8 a. Explain the following (@ 3 Mk)

(i) Reproduction (ii) Propagation (iii) Alteration of generation

b. Name three (3) plant growth substances and give one (1) function of each (9 Mk)

c. State four (4) essential minerals and give one (1) function of each (7 Mk)

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