

# Uganda Martyrs University

## Faculty of Agriculture

B. Agriculture I Semester I Final Exam: 2020/2021

### Course Unit: PAP 1102 – Plant Anatomy & physiology

Date Issued: 15th July 2021 at 9: 30 am

Date and Time of Submission: 15th July 2021 at 3.30 pm

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#### Instructions:

- i Attempt any **four** questions
- ii Each question is 25 marks
- iii *Save your work in **MS Word** and name your file your **full names***
- iv **Send your work to *hnaigaga@umu.ac.ug***

- 1a) What is the main difference between the following;-
  - i. Plant anatomy and plant taxonomy (**5 marks**)
  - ii. Plant cell and animal cell (**5 marks**)
- b) Explain the different types of plant tissues (**15marks**)
- 2a) Define the term photosynthesis (**5 marks**)
- b) Explain the light dependent reaction of photosynthesis (**20 marks**)
- 3a) Explain the three pathways for water movement in the roots (**10 marks**)
- b) Discuss the factors which influence the rate of water absorption by plants (**15 marks**)
- 4) With aid of diagrams and species examples, explain the different types of herbaceous stems.  
( **25 marks**)
- 5a) What is glycolysis (**3 marks**)
- b) Explain the two phases of glycolysis. (**22 marks**)
- 6a) Define the term growth as applied to plant physiology (**4 marks**)
- b) Explain the main types of cell division in plants (**6 marks**)
- c) Discuss the three main phases of plant cell growth (**15 marks**)
- 7) Discuss with examples how different plant species are adapted to survive in conditions of water stress. (**25 marks**)
- 8a) Discuss the major hormone groups in plants (**10 marks**)
- b) Explain the mechanism of water absorption by plants (**15 marks**)

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