

UNIVERSITY OF SWAZILAND

MAIN (FINAL) EXAMINATION PAPER 2012/2013

- COURSE CODE : B402
- TITLE OF PAPER : PLANT PHYSIOLOGY
- TIME ALLOWED : THREE (3) HOURS
- INSTRUCTIONS :
1. ANSWER ANY FOUR (4) QUESTIONS
  2. EACH QUESTION CARRIES 25 MARKS.
  3. ILLUSTRATE YOUR ANSWERS WITH LARGE AND CLEARLY LABELLED DIAGRAMS WHERE APPROPRIATE

SPECIAL REQUIREMENTS :

CANDIDATES MAY BRING THEIR CALCULATORS. GRAPH PAPER MAY BE PROVIDED ON REQUEST.

THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR(S).

QUESTION 1.

Describe the structure of the leaf with particular reference to water resource mobilization and give an account of the mechanism of stomatal activity.

[Marks 25]

QUESTION 2.

Describe the process of photosynthesis in C3 plants.

[25 Marks]

QUESTION 3.

Discuss the possible mechanisms of dehydration stress resistance in higher plants.

[25 Marks]

QUESTION 4.

Discuss the functional significance of Nitrogen in mineral nutrition of plants.

[25 Marks]

QUESTION 5.

With reference to some specific essential mineral nutrient for higher plants, explain the role of soil microbes in the provision of the nutrient in soils.

[25 Marks]

QUESTION 6.

Describe the possible regulatory effects of Auxins in plant growth and development.

[25 Marks]

[TOTAL MARKS: 100]