

UNIVERSITY OF SWAZILAND

MAIN (FINAL) EXAMINATION PAPER 2011/2012

- 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.

[a]. Describe the initial process of phloem transport in the areas where organic solutes are synthesized in vascular plants.

[10 Marks]

[b]. Explain the possible mechanism of delivery of organic solutes in the areas where they are needed in the plants.

[15 Marks]

QUESTION 2.

Discuss the statement "Light is an important environmental cue for plants."

[25 Marks]

QUESTION 3.

Describe the effects of dehydration stress on higher plants.

[25 Marks]

QUESTION 4.

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

[25 Marks]

QUESTION 5.

Describe a loam soil noting the characteristics of relevance to plant growth and their possible role in plant growth.

[25 Marks]

QUESTION 6.

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

[25 Marks]

[TOTAL MARKS: 100]