



UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER

**PROGRAMME: BACHELOR OF SCIENCE IN AGRICUTURAL
EDUCATION YEAR THREE
BACHELOR OF SCIENCE IN AGRONOMY YEAR THREE
BACHELOR OF SCIENCE IN HORTICULTURE**

COURSE CODE: CP 305

TITLE OF PAPER: CROP PHYSIOLOGY

TIME ALLOWED: TWO (2) HOURS)

**INSTRUCTIONS: ANSWER QUESTION ONE (1) AND ANY OTHER
THREE QUESTIONS**

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN
GRANTED BY THE CHIEF INVIGILATOR.**

QUESTION 1

Discuss how auxin regulates the following developmental phenomena: apical dominance, lateral and adventitious roots, leaf abscission, floral bud development, vascular differentiation and fruit development.

[25 marks]

QUESTION 2

Compare and contrast the light compensation point and the CO₂ compensation point.

[25 marks]

QUESTION 3

What is a mineral deficiency? Using examples, show how a mineral deficiency can be recognized? How can farmers benefit from nutrient analysis?

[25 marks]

QUESTION 4

Can heat absorption by leaves hinder leaf function? Explain your answer and describe ways in which leaves can dissipate absorbed heat.

[25 marks]

QUESTION 5

Describe the pressure-flow model of translocation in the phloem. Does water move down its water potential gradient in this model? Explain.

[25 marks]