105

2ND SEMESTER 2016-2017 (S)

UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER

PROGRAMME: B. Sc. AGRICULTURAL EDUCATION, YEAR THREE
B. Sc. AGRONOMY, YEAR THREE
B. Sc. HORTICULTURE, YEAR THREE

COURSE CODE: CP 305

TITLE OF PAPER: CROP PHYSIOLOGY

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ALL QUESTIONS

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QUESTION 1

The interaction between nutrient mobility in the plant, and plant growth rate can be a major factor influencing the type and location of deficiency symptoms that develop. Mention and describe

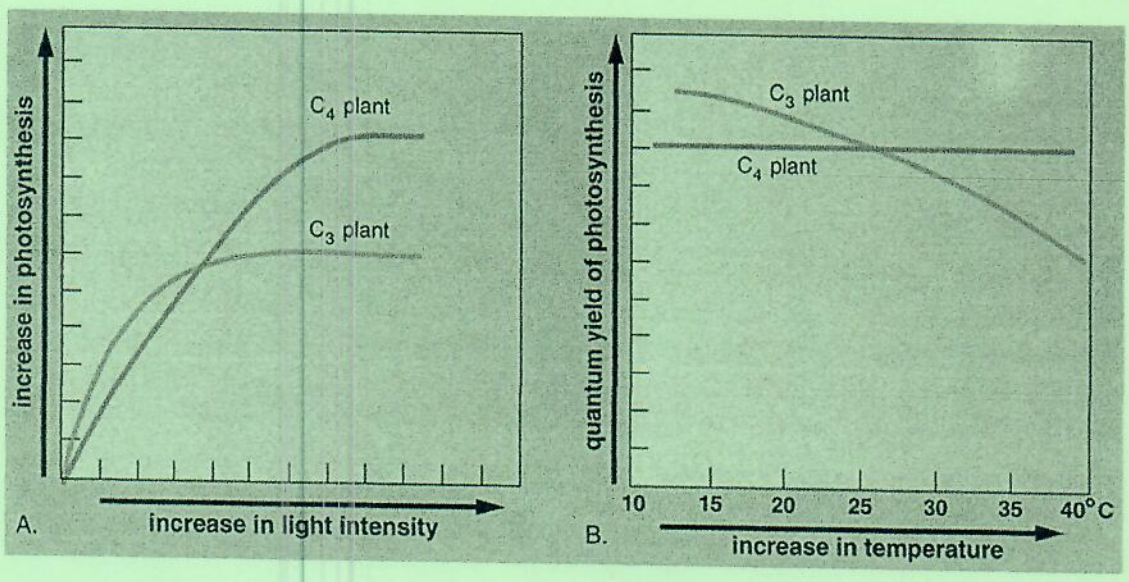
a) one nutrient element each that is immobile, mobile and of intermediate mobility, respectively,
b) type of deficiency symptoms for each, and
c) the location of deficiency symptoms on the plant for each of the three mentioned nutrient elements

(30 Marks)

QUESTION 2

Carefully study the diagrams (A) and (B) below. Describe the physiological reasons for the performance of C3 plants in comparison to C4 plants.

(20 Marks)



QUESTION 3

Compare and contrast the light compensation point and the CO_2 compensation point.

(20 Marks)

QUESTION 4

Discuss how auxin regulates the following developmental phenomena: apical dominance, lateral and adventitious roots, leaf abscission, phototropism, and, vascular differentiation. For each phenomena, elaborate another hormone, organic molecule or process that auxin interacts with?

(30 Marks)