



UNIVERSITY OF ESWATINI

RESIT EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION, Yr 2
BACHELOR OF SCIENCE IN AGRICULTURAL EXTENSION, Yr 2
BACHELOR OF SCIENCE IN AGRONOMY, Yr 2
BACHELOR OF SCIENCE IN HORTICULTURE, Yr 2

COURSE CODE: CPR203

TITLE OF PAPER: CROP PHYSIOLOGY

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ALL QUESTIONS

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QUESTION 1

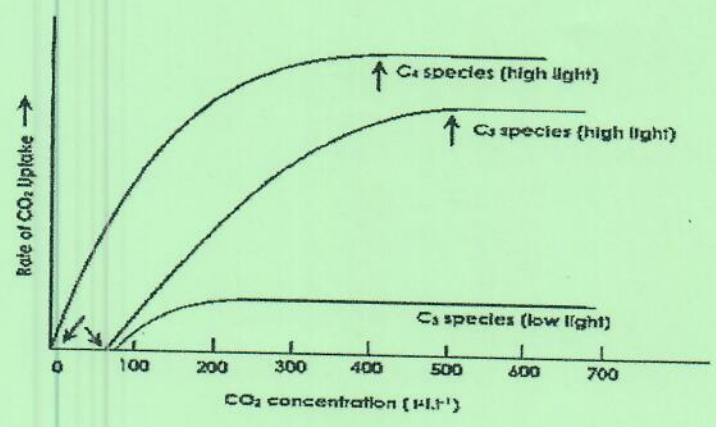
- a) Briefly summarize the four major consequences of sedentary life of plants. [12.5 marks]
- b) Describe mechanisms plants use to respond to each? [12.5 marks]

QUESTION 2

There is current concern that temperatures and the level of CO₂ are increasing in the biosphere due to the burning of fossil fuels. How would this affect photosynthesis in C₃ and C₄ plants, respectively? [25 marks]

QUESTION 3

- (a) Carefully study the diagram below. Explain your observations giving reasons. [12 marks]



- (b) Abscisic acid (ABA) is sometimes termed a stress hormone produced by a plant under stress. Describe two roles where ABA shows to be rather of ecological and physiological significance to the plant. [13 marks]

QUESTION 4

- a) Which form of phytochrome is the physiologically active form? Justify your answer.
[5 marks]
- b) Is the photoconversion of phytochrome from one form to another ever 100 per cent? Explain, giving reasons.
[6 marks]
- c) What is the importance of the water potential concept in plant physiology? [6 marks]
- d) What are the components of water potential? [8 marks]