



MACHAKOS UNIVERSITY

University Examinations 2022/2023 academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

SECOND YEAR FIRST SEMESTER EXAMINATION

BACHELOR OF SCIENCE IN BIOLOGY

SBT 200 : PLANT ECOLOGY

DATE:

TIME:

INSTRUCTIONS

Answer Question 1 (compulsory) and **any two** questions in Section B

SECTION A (COMPULSORY)

QUESTION ONE (30 MARKS)

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| a) | Describe the factors which affect the solubility of the states of matter | (3 marks) |
| b) | Explain the composition of colloids | (3 marks) |
| c) | Outline the characteristics of imbibition in plants | (3 marks) |
| d) | Describe the components of water potential | (3 marks) |
| e) | Describe ion uptake into the plant cells | (3 marks) |
| f) | Discuss the factors affecting the rate of osmosis | (3 marks) |
| g) | Describe the distribution of enzymes within plants | (3 marks) |
| h) | Discuss the effect of Gibberellins in plants | (3 marks) |
| i) | Explain the methods used in studying plant nutrition | (3 marks) |
| j) | Explain the classification of lipids | (3 marks) |

SECTION B: ANSWER ANY TWO QUESTIONS

QUESTION TWO (20 MARKS)

Discuss the classification of Carbohydrates.

QUESTION THREE (20 MARKS)

Discuss photosynthesis.

QUESTION FOUR (20 MARKS)

- a) Describe the classification of enzymes (10 marks)
- b) Discuss the effect of endogenous plant hormones (10 marks)

QUESTION FIVE (20 MARKS)

- a) Describe the reaction sequences of glycolysis (10 marks)
- b) Explain the process of aerobic respiration (10 marks)