



MACHAKOS UNIVERSITY

University Examinations for 2020/2021

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

SECOND YEAR FIRST SEMESTER EXAMINATION FOR
BACHELOR OF EDUCATION (SCIENCE)

BACHELOR OF SCIENCE (AGRICULTURAL EDUCATION AND EXTENSION)

SBT 200 PLANT ECOLOGY

DATE: 20/8/2021

TIME: 8:30 – 10:30 AM

INSTRUCTIONS

Answer Question 1 (Compulsory) and **any TWO** Questions in Section B

SECTION A (COMPULSORY)

QUESTION ONE (30 MARKS)

- a) Describe the major life form classes as stated in Raunkier's plant classification (5 marks)
- b) Explain the principle on the functionality of hygrometer (3 marks)
- c) Describe the disadvantages of the harvest method in determination of net primary production (3 marks)
- d) State three climax communities under the poly climax theory as proposed by Tansley (3 marks)
- e) Explain the hydrarch succession. (2 marks)
- f) Describe podsolization as a soil maturation process. (3 marks)
- g) Describe how light affects the aquatic ecosystems. (3 marks)
- h) Describe the climate of the Afro-Alpine zone. (3 marks)
- i) Describe biogeography as used in the distribution of organisms (2 marks)
- j) Discuss the major sub-divisions of the atmosphere (3 marks)

SECTION B:ANSWER ANY OTHER TWO QUESTIONS

QUESTION TWO (20 MARKS)

Write an essay on

- a) Two Quadrat Sampling methods (10 marks)
- b) Measurements in vegetation ecology (10 marks)

QUESTION THREE (20 MARKS)

Discuss Human effects on natural ecosystems

QUESTION FOUR (20 MARKS)

Discuss primary productivity.

QUESTION FIVE (20 MARKS)

Discuss the climax plant community.