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(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2020/2021 ACADEMIC YEAR

THIRD YEAR SECOND SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE

COURSE CODE: SBT 323

COURSE TITLE: PLANT ECOLOGY II

DATE: 11TH JANUARY 2022

TIME: 8.00 – 10.00 AM

INSTRUCTIONS TO CANDIDATES

Answer Question one (1) and any other two (2) Questions. Question one is compulsory and carries 30 marks, the other Questions carry 20 marks each.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

1. (a) (i) Differentiate between biotic potential and environmental resistance as factors determining population size (2 mark)
- (ii) Briefly describe the carrying capacity of an ecosystem (4 Marks)
- (iii) Explain exponential growth rate of a population (4 marks)
- (b) (i) Define a niche. (1 Marks)
- (ii) Differentiate between a fundamental niche and a realised niche. (4 Marks)
- (iii) Explain the competitive exclusion theory of Hutchinson (1957). (5 Marks)
- (c) (i) Briefly describe Alpine shrub land (4 Marks)
- (ii) Define an ecotone (1 mark)
- (iii) Describe an ecotonal community (3 marks)
- (iv) Explain species abundance (2 marks)
2. Discuss plant population dynamics (20 Marks)
3. Discuss the quantitative structure of plant community. (20 Marks)
4. Discuss tropical rainforests as terrestrial biomes. (20 Marks)
5. Discuss plant life forms. (20 Marks)