



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2015/2016

**FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE
DEGREE OF MASTERS OF SCIENCE IN BOTANY (PLANT
ECOLOGY, PLANT PHYSIOLOGY AND BIOCHEMISTRY)**

MAIN CAMPUS

SBT 813: COMMUNITY STRUCTURE AND COMPOSITION

Date: 19th April, 2016

Time: 8.30 - 11.30am

INSTRUCTIONS:

- Answer ALL Questions in Section A and any other THREE from Section B.

SECTION A: 30 Marks

1. (a) Discuss the chronological development of the Niche history (10 marks)
(b) Explain how the niche theory is currently useful to an ecologist (5 marks)
2. (a) Explain Grime's plant strategies of succession (8 marks)
(b) Discuss Tilman's Resource Ratio model of plant competition (7 marks)

SECTION B: (30 marks)

3. Critically analyse the latitudinal biodiversity gradients on earth (10 marks)
4. Discuss Raunkiaer Life forms in relation to plant community distribution (10 marks)
5. Discuss the community equilibrium and stability paradigm (10 marks)
6. Compare direct and indirect gradient analysis (10 marks)
7. Compare the organismic (Clement) and Individualistic (Gleason) views of community succession (10 marks)