



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2015/2016

**FIRST YEAR FIRST SEMESTER EXAMINATIONS FOR THE
DEGREE OF MASTER OF SCIENCE**

MAIN CAMPUS

SBT 804: APPLIED ECOLOGY

Date: 9th December, 2015

Time: 8.30 - 11.30am

INSTRUCTIONS:

- Answer ALL Questions in section A and any THREE selected from section B.

TIME: 3 HOURS

SECTION A: 30 MARKS

1. Discuss the functional groups of the microorganisms in the biogeochemical nitrogen cycle, showing the oxidation state and the uptake or loss of electrons (15 marks)
2. Discuss the emerging issues in the evolutionary strategy types of Grime (C-S-R model) and the facilitation tolerance inhibition model of Connell and Slatyer in the survival of the plants (15 marks)

SECTION B: 30 MARKS

1. Discuss ecological stability using Pimm and Gigon's concepts of ecological stability (10 marks)
2. Discuss the nature of primary productivity in tropical ecosystems (10 marks)
3. Discuss the island biogeography steady-state theory according to Preston, MacArthur and Wilson (10 marks)
4. Discuss the course of primary succession and secondary succession (10 marks)
5. Describe the methods for studying succession in the plants (10 marks)