



**MASENO UNIVERSITY**  
**UNIVERSITY EXAMINATIONS 2013/2014**

**THIRD YEAR FIRST SEMESTER EXAMINATIONS FOR THE  
DEGREE OF BACHELOR OF SCIENCE IN ENVIRONMENTAL  
SCIENCE WITH INFORMATION TECHNOLOGY**

**(MAIN CAMPUS)**

**NES 302: BIODIVERSITY AND CONSERVATION**

*Date: 20<sup>th</sup> November, 2013*

*Time: 8.30 - 10.30 a.m.*

---

**INSTRUCTIONS:**

- **Answer Question ONE and any other TWO questions.**

1. a). Describe the THREE components of biological diversity. [9 marks]  
b). Explain how the theory of island biogeography can be used to estimate the necessary shape, size and proximity of protected areas. [12 marks]  
c). Explain the THREE main efforts that have been put in place to conserve Lake Naivasha's environment. [9 marks]
2. a). Give the TWO major approaches used for conserving biodiversity in Kenya. [6 marks]  
b). Explain the legal and institutional frameworks put in place by the Kenyan Government to conserve biodiversity. [14 marks]
3. After carrying out a wildlife survey in Maasai Mara reserve, it was established that the population of the Elephants had declined below critical levels in the wake of increased poaching in Kenya. As a wildlife manager, explain how you can prevent the extinction of the Elephants. [20 marks]
4. a). Explain FOUR ecological correlates of vulnerability to species extinction. [8 marks]  
b). Discuss the TWO approaches used for estimating the minimum viable population of species to be conserved. [12 marks]
5. a). Describe the FOUR levels of species conservation. [8 marks]  
b). Explain the most common problems in population genetics. [12 marks]
6. Discuss how human-wildlife conflict can be prevented in Kenya. [20 marks]