

UNIVERSITY OF KWAZULU-NATAL
SCHOOL OF AGRICULTURAL, EARTH & ENVIRONMENTAL SCIENCES
DISCIPLINE OF GEOGRAPHY
MAIN EXAMINATION: NOVEMBER 2014
ENVS708: BIOGEOGRAPHY OF INVASIVE SPECIES

DURATION: 3 HOURS

TOTAL MARKS: 300

External Examiner: Prof. S. Proches

Internal Examiner: Prof. S. Grab

**NOTE: THIS PAPER CONSISTS OF ONE PAGE
ANSWER SECTION 1 AND SECTION 2**

SECTION 1: ALL QUESTIONS ARE COMPULSORY.

1. Briefly explain the content, implications and limitations of the “Tens Rule” in Invasion Biology. (25)
2. What are the main differences between fish invasions and the better known terrestrial plant and animal invasions? Briefly explore the reasons for these differences. (25)
3. Name one key trait which differs significantly between invasive and non-invasive plants, and provide examples of species alien to South Africa in either category. (25)
4. Describe an emerging ecosystem in the Durban area, mentioning major invasive species that are part of it, and their origin. (25)

SECTION 2: ANSWER TWO OF THE ESSAY-TYPE QUESTIONS BELOW.

5. Write an essay comparing natural (along the history of life on Earth) and man-assisted invasions in terms of frequency, distance, and impacts, and providing key examples of both. (100)
6. Critically explore the concept of invisibility, providing examples of heavily invaded and nearly un-invaded habitats in South Africa and around the world, and explaining what may drive these patterns. 100)
7. Write an essay placing biological control in the context of other methods of controlling alien invasive species, but also in the context of plant-insect interactions theory. (100)