

UNIVERSITY OF KWAZULU-NATAL
SCHOOL OF AGRICULTURAL, EARTH & ENVIRONMENTAL SCIENCES
SUPPLEMENTARY EXAMINATION: JUNE 2013
SUBJECT, COURSE & CODE: SOIL EROSION AND LAND DEGRADATION,
ENVS315W1

DURATION: 3 HOURS

TOTAL MARKS: 300

EXTERNAL EXAMINER: Professor S Grab

INTERNAL EXAMINER/S: Dr H Watson and Mr Z Goolam Hoosen

NOTE: THIS PAPER CONSISTS OF ONE (1) PAGE.

Instruction to students:

Answer three of the five questions. Answer each question in a separate answer-book and make sure they are numbered correctly.

1. Compare the mechanics of surface and subsurface processes responsible for the formation of gullies. **(100)**
2. Describe and critically assess the importance of the Universal Soil Loss Equation. **(100)**
3. Discuss five primary factors that influence soil erosion, highlighting why there is general consensus that land use practices exert the dominant influence. **(100)**
4. “Those who criticize southern Africa’s poor agriculture productivity relative to the USA, Europe and Asia and focus only on socio-economic factors when lamenting the region’s declining crop yields, need to recognize that most of our soils are inherently not suitable for cultivation. They are best suited to extensive and particularly wildlife, ranching” (Ristori, 2007). Critically discuss this statement. **(100)**
5. “A combination of historical and geomorphological analysis emphasizes that erosion is a natural process but that its rate and spatial and temporal distribution depend on the interaction of physical and human circumstances” (Morgan, 1995: 6). Critically discuss this statement. **(100)**