

**UNIVERSITY OF SWAZILAND
DEPARTMENT OF GEOGRAPHY, ENVIRONMENTAL SCIENCE
AND PLANNING
SUPPLEMENTARY EXAMINATION, JULY 2008**

TITLE OF PAPER: **APPLIED PHYSICAL
GEOGRAPHY**

COURSE CODE: **GEP 227**

TIME ALLOWED: **THREE HOURS**

INSTRUCTIONS: **ANSWER QUESTION ONE AND
ANY OTHER TWO QUESTIONS**

MARKS ALLOCATED: **QUESTION 1 CARRIES 40
MARKS. THE OTHER
QUESTIONS CARRY 30 MARKS
EACH.**

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN
GRANTED BY THE INVIGILATOR**

SECTION A

QUESTION 1 (COMPULSORY)

- a. Differentiate between rock decomposition and rock disintegration stating the conditions under which each is dominant. (10 marks)
 - b. Discuss the various factors that contribute to the rate of rock disintegration and decomposition. (15 marks)
 - c. Explain the role of rock decomposition in the formation of primary and secondary soil minerals. (15 marks)
- (40 marks)**

SECTION B

ANSWER ANY TWO QUESTIONS

QUESTION 2

Using relevant examples, explain how soil organisms contribute to soil productivity and the maintenance of soil quality. (30 marks)

QUESTION 3

- a. Discuss the origins and types of charges in soils. (10 marks)
 - b. Examine the role played by these charges in the soil's function as a medium for plant growth, a system for water purification and a medium for the recycling of nutrients. (20 marks)
- (30 marks)**

QUESTION 4

Explain how Plate Tectonics has contributed to the formation of various landscape features. (30 marks)

QUESTION 5

Discuss the role of the following factors in slope failures.

- | | |
|------------------------|-----------|
| i. Shocks | (6 marks) |
| ii. Slope modification | (6 marks) |
| iii. Under cutting | (6 marks) |
| iv. Precipitation | (6 marks) |
| v. Volcanic eruptions | (6 marks) |

(30 marks)