

**UNIVERSITY OF SWAZILAND  
DEPARTMENT OF GEOGRAPHY, ENVIRONMENTAL SCIENCE  
AND PLANNING  
SUPPLEMENTARY EXAMINATION, JULY 2009**

**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.**

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GRANTED BY THE INVIGILATOR**

## SECTION A

### QUESTION 1 (COMPULSORY)

- a. Discuss the various factors that contribute to the rate of rock disintegration and decomposition. (20 marks)
- b. Explain the role of rock decomposition in the formation of primary and secondary soil minerals. (20 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. Discuss the role played by soil charges in the soil's function as a medium for plant growth, and a system for water purification. (20 marks)

(30 marks)

#### QUESTION 4

Explain how Plate Tectonics has contributed to the formation of any 3 landscape features. (30 marks)

#### QUESTION 5

Describe 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)