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**UNIVERSITY OF SWAZILAND
DEPARTMENT OF GEOGRAPHY, ENVIRONMENTAL SCIENCE &
PLANNING**

FINAL EXAMINATION, MAY 2005

TITLE OF PAPER: BIOGEOGRAPHY

COURSE CODE: GEP 312

TIME ALLOWED: THREE (3) HOURS

**INSTRUCTIONS: ANSWER THREE (3) QUESTIONS INCLUDING
QUESTION ONE (1) WHICH IS COMPULSORY**

**MARKS ALLOCATION: QUESTION ONE (1) CARRIES 40 MARKS . THE
REST OF QUESTIONS CARRY 30 MARKS EACH**

**THIS QUESTION PAPER SHOULD NOT BE OPENED UNTIL PERMISSION
HAS BEEN GRANTED BY THE INVIGILATOR.**

SECTION A

QUESTION 1 (COMPULSORY)

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- a) Identify and list five [5] major themes or approaches in the study of Biogeography. (10 marks)
- b) Briefly discuss any two [2] of the major themes or approaches identified above. (10).
- c) Briefly discuss the following soil-forming factors.
 - i) Climate (4)
 - ii) Time (4)
 - iii) Organisms (4)
 - iv) Parent material (4)
 - v) Relief (4)

(40 marks)

SECTION B

Answer any TWO (2) questions from this section.

QUESTION 2

- i) Discuss the physical and biological factors affecting the characteristics and development of an ecosystem. (20 marks)
- ii) Compare and contrast gross primary productivity (GPP) and net primary productivity (NPP). (10 marks)

(30 marks)

QUESTION 3

- i) 'Ecosystems are frequently referred to as dynamic and capable of responding or adjusting to any external environmental change'. Discuss. (20 marks)
- ii) 'Organisms are better classified on the basis of their feeding strategies in an ecosystem'. Discuss. (10 marks)

(30 marks)

QUESTION 4

Elucidate phosphorus cycle and carbon cycle in the flow of energy and nutrients in an ecosystem.

(30 marks)

QUESTION 5

- i) Describe how autotrophs manufacture the types of energy and matter needed for ecosystem sustainability. (15 marks)
- ii) Discuss the types of fire as an ecosystem management tool in the study of Biogeography. (15 marks)

(30 marks)
