

UNIVERSITY OF SWAZILAND
DEPARTMENT OF GEOGRAPHY, ENVIRONMENTAL SCIENCE AND
PLANNING
FINAL EXAMINATION PAPER, DECEMBER 2008
B. Sc.

TITLE OF PAPER: AGRICULTURAL SYSTEMS

COURSE NUMBER: GEP 326

TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS:

- 1. ANSWER FOUR (4) QUESTIONS**
- 2. CHOOSE TWO (2) FROM EACH SECTION**
- 3. ILLUSTRATE YOUR ANSWERS WITH
EXAMPLES AND CLEARLY DRAWN DIAGRAMS
WHERE APPROPRIATE**

**ALLOCATION OF MARKS: EACH QUESTION CARRIES
25 MARKS**

**THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN GRANTED
BY THE INVIGILATOR**

GEP 326 – AGRICULTURAL SYSTEMS – DECEMBER 2008

SECTION A: ANSWER ANY TWO QUESTIONS

QUESTION 1

(a) Using the crop theory, explain how von Thunen arrived at the concentric rings.
(13 marks)

(b) Discuss the principles that determined the concentric rings in von Thunen's theory of agricultural location

(12 marks)

(25 marks)

QUESTION 2

(a) Using examples, explain how economic and physical factors affect farming.
(10 marks)

(b) Discuss why farmers react differently to similar ideas on innovations.

(15 marks)

(25 marks)

QUESTION 3

(a) Explain how "the tragedy of the commons" was avoided in past pastoralists systems.
(15 marks)

(b) Using examples, discuss how the pastoralists' management strategies were disrupted.
(10 marks)

(25 marks)

SECTION B: ANSWER ANY TWO QUESTIONS

QUESTION 4

a) 'Soil is a medium through which water moves and is stored'. Using examples discuss the validity of this statement.
(15 marks)

b) With an aid of well labelled illustrations describe how water moves from the atmosphere to the earth surface.
(10 marks)

(25 marks)

QUESTION 5

'The principal weather parameters affecting evaporation are radiation, air temperature, humidity, and wind speed'. Using examples discuss the validity of this statement.

(25 marks)

QUESTION 6

Explain how you would estimate water requirement for any crop of your choice.

(25 marks)