

**UNIVERSITY OF SWAZILAND**  
**DEPARTMENT OF GEOGRAPHY, ENVIRONMENTAL SCIENCE AND PLANNING**  
**FINAL EXAMINATION, DECEMBER 2014**  
**B. Sc., B.Ed**

**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**  
**:                                TOTAL MARKS FOR THE PAPER 100**

**THIS PAPER SHOULD NOT BE OPENED UNTIL PERMISSION IS GRANTED BY  
THE INVIGILATOR**

**GEP 326 – AGRICULTURAL SYSTEMS – DECEMBER 2014**

**SECTION A: ANSWER ANY TWO (2) QUESTIONS**

**QUESTION 1**

Examine the role of expansion, intensification, and diversification of land use in increasing land productivity and improving food security. **(25 Marks)**

**QUESTION 2**

Discuss the effects of modern agriculture on the environment. **(25 Marks)**

**QUESTION 3**

With the aid of diagrams, explain the necessary modifications which have to be made on von Thunen's agricultural location model to make it applicable in developing countries. **(25 Marks)**

**SECTION B: ANSWER ANY TWO (2) QUESTIONS**

**QUESTION 4**

Discuss the environmental and socio-economic impacts of climate change. **(25 Marks)**

**QUESTION 5**

Discuss the factors controlling crop yield potential. **(25 Marks)**

**QUESTION 6**

Discuss four experimental techniques designed to modify weather. **(25 Marks)**