

**UNIVERSITY OF SWAZILAND
FACULTY OF SOCIAL SCIENCE
DEPARTMENT OF ECONOMICS**

SUPPLEMENTARY EXAMINATION PAPER: JULY, 2017

**TITLE OF PAPER: ECONOMICS OF AGRICULTURE
COURSE CODE: ECON 410
TIME ALLOWED: THREE (2) HOURS**

INSTRUCTIONS:

1. Answer Question **ONE** and any other **TWO** questions.
2. Show all relevant workings to your answer

SPECIAL REQUIREMENTS: SCIENTIFIC CALCULATOR

**DO NOT OPEN THIS QUESTION PAPER UNTIL INSTRUCTED TO DO SO BY
THE INVIGILATOR.**

Question 1 (Compulsory)

- a) A farmer is faced with the following production function;

$$Y = 18X_1 - X_1^2 + 14X_2 - X_2^2 + X_1X_2,$$
 The price of output is E0.65, and the input prices are $P_{x_1} = 9$, and $P_{x_2} = 7$
 find the levels of input usage that will optimize profit for the farmer, and hence the optimum level of profit. [20 marks]
- b) Explain the principle of equi-marginal returns. [5 marks]
- c) Using diagrams to illustrate your answer, distinguish between the three efficiency concepts, i.e. technical efficiency, allocative efficiency, and economic efficiency. [13 marks]
- d) Discuss any four factors that hinder agricultural development in Sub-Saharan Africa. [12 marks]

Question 2

- a) Discuss the factors influencing the aggregate supply response of the agricultural sector in Sub-Saharan Africa countries. [13 marks]
- b) Distinguish between the modern capital sector and the traditional sector in agriculture. [10 marks]

Question 3

Discuss the linkage between development economics and agricultural development under the following phases:

- i. Growth and modernization
- ii. Growth with equity
- iii. Structural adjustments/ policy reform period [25 marks]

Question 4

(a) Distinguish between the following stages of decision making in agricultural production

- i. Factor-factor relationship
- ii. Factor- product relationship
- iii. Product- product relationship [5marks each]

(b) The classical production function can be divided into three regions, each important from the standpoint of resource allocation. Draw the three regions and explain why each of the stages is /or is not ideal for production. [10 marks]