



NATIONAL OPEN UNIVERSITY OF NIGERIA  
University Village, Nnamdi Azikiwe Expressway, Plot 91, Cadastral Zone, Jabi, Abuja  
Faculty agricultural Sciences  
First Semester Exam Question June, 2017

**Course Title: Agricultural Production Economics**

**Course Code: AEA 303**

**Credit Unit: 3**

**Time Allowed: 3 Hours**

**INSTRUCTION: Answer any five (5) questions. All questions carry equal marks.**

1. a). What do you understand by the term ISO-revenue line and Output expansion path? 4Mrks  
b). Highlight the characteristic features of the ISO-revenue line? 8marks  
c). Illustrate the relationship that exist between ISO-revenue line and Output expansion path. 8mrks
2. a). Write short note on marginal rate of technical substitution (MRTS) and Isoquant. 12Mrks  
b). What are the characteristic features of MRTS and Isoquant? 8mrks
3. a). Define the term elasticity of production? 10mark  
b). State the end product of output elasticity will guide you to determine elasticity of production in the three stages of production function. 10mrks
4. a). State the implicit production function product-product relationships. 4mrks  
b). With the aid of distinct examples highlight the different types of product-product relationships. 16mrks
5. a). List four assumptions for determining the optimum level of output in a resource allocation involving one variable input and one product. 8mkrs  
b). Highlight five uses of economics in agriculture? 12mrks

6. Described the three forms of input substitution and graphically illustrated them? 20mrks

7a). Defined the term agricultural cost function? 2marks

Illustrate the production costs for various levels of output with the production function with one variable? 2marks

State the implicit production function of the above cost function? 4marks

7b). With the aid of a well-labeled diagram, graphically express the relationship that exists between Total Cost (TC), Total Fixed Cost (TFC) and Total Variable Cost (TVC). 12marks