**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**FACULTY OF AGRICULTURAL SCIENCES**

**DEPARTMENT OF AGRICULTURAL ECONOMICS AND EXTENSION**

**FIRST SEMESTER EXAMINATION, APRIL/MAY, 2019**

**Programme: Agricultural Extension and Management**

**Course Title: Agricultural Production Economics and Resources Management**

**Course Code: AEM403 Credit Unit: 3**

**Time Allowed: 3 Hours**

**INSTRUCTION: Answer Compulsory question 1 (30 marks) and any 4 questions (10 marks each).**

**Question 1.**

1. Define resource and environmental economics 4 marks
2. Discuss briefly valuation of scarce farm resources 6 marks

**(**c) Explain three main components of a linear programming. 6 marks

(d) Describe the types of Total Cost 6 marks

(d) How do you determine the point of maximum profit in a factor – factor relationship 8mks

**Question 2.**

(a ) Explain principles of comparative advantage 4 marks.

( b) State 3 basic properties of an Isoquant 6 marks

**Question 3.**

Explain the following principles and terms used in production

( a) Law of Diminishing Marginal Returns 3 marks

( b) Principles of Maximum Profit 3 marks

( c) Principle of Limited Resources (Equi-marginal Principles) 4 marks

**Question 4.**

1. Define revenue. 1 mark
2. Describe the 3 types of revenue (Equation necessary). 9 marks

**Question 5.**

1. Explain why Cost functions are derived functions. 4 marks

(b) Discuss Gross Margin as it relates to Farm Profit. 6 marks

**Question 6**

Describe the following in relation to input

i. Constant rate of substitution 3 marks

ii. Increasing rate of substitution 3 marks

iii. Decreasing rate of substitution 4 marks

**Question 7.**

1. Define linear programming. 2 marks

(b ) Describe what happens in Stage I of Stages of production of input – output relationship.

 8 marks