



NATIONAL OPEN UNIVERSITY OF NIGERIA

PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESS WAY, JABI, ABUJA

FACULTY OF SCIENCES

2021_2 POP EXAMINATION

COURSE CODE: DAM462

COURSE TITLE: AGRICULTURAL DATA SYSTEMS

CREDIT: 2 UNITS

TIME ALLOWED: 2 HOURS

INSTRUCTION: Answer Question One (1) and any other three (3) Questions

- a. In a single sentence each, state the basic meaning of the last 2 levels in farm level systems and their interpretations. **(3 Marks)**
- b. Explain the UNIQUENESS, GENERATION and AGGREGATION elements of Data model. **(3 Marks)**
- c. Briefly explain the Networking and Transmission media components of IT as it applies to agricultural development. **(4 marks)**
- d. Briefly explain the Simulation and Optimization techniques of mathematical modeling of agricultural systems. **(4 Marks)**
- e. Itemize the High-level Decision Support System Requirements. **(2 Marks)**
- f. Itemize the benefits of applying DSS in Agricultural Systems. **(2 Marks)**
- g. Database is perceived by its user as set of facts about objects. These facts are of three types. List them. **(3 Marks)**
- h. Mention any 4 recommendations for promoting the management of agriculture and database development. **(4 Marks)**

QUESTION TWO (15MARKS)

- a. Briefly explain the “whole-farm systems”. **(6 Marks)**
- b. What is information Technology? **(5 Marks)**
- c. Discuss the relevance of Information Technology with regard to access to variety of learning resources for farmers. **(4 Marks)**

QUESTION THREE (15MARKS)

- a. Discuss “Output Devices” and “Storage devices” as components of Information Technology in Agricultural development. **(6 Marks)**
- b. What are the benefits of system modeling? **(6 Marks)**
- c. Itemize any 6 functions of Information Technology Professionals. **(3 Marks)**

QUESTION FOUR (15MARKS)

- a. Explain briefly the Order Level 3 hierarchy of the Agricultural system. **(5 Marks)**
- b. Discuss the “Purposefulness of a farm household system. **(6 Marks)**
- c. Discuss briefly, “farmer Decision Support Computer Models” in agricultural applications. **(4 Marks)**

QUESTION FIVE (15MARKS)

- a. What is the usefulness of Biophysical Simulation models? **(4 Marks)**
- b. Discuss the “ecosystem management issues needed for better information to optimize agricultural systems. **(5 Marks)**
- c. Explain with examples the use of Expert System Shells in developing agricultural systems. **(6 Marks)**