



MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

FOURTH YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION AEE

413: AGRICULTURAL INFORMATION MANAGEMENT

DATE:

TIME:

INSTRUCTIONS:

Answer *ALL* questions from Section A and any other *TWO* from Section B:

SECTION A: COMPULSORY: (30 MARKS)

QUESTION ONE

- a) Explain the following terms
 - i) Knowledge (2 Marks)
 - ii) Open Access (2 Marks)
- b) Describe two types of data models (4 Marks)
- c) Describe the three role sof data modeling (6 Marks)
- d) Discuss three important roles of Global Positioning system (GPS) in data acquisition (6 Marks)
- e) Describe five types of databases applied in precision farming (5 Marks)
- f) Describe five organizations involved with the production or distribution of agricultural information at the local level (5 Marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

QUESTION TWO (20 MARKS)

- a) Discuss five National Organizations involved in production, promotion and Marketing of agricultural produce (10 Marks)

- b) Describe the logical structure of a database using Entity-Relationship (ER) Diagram (10 Marks)

QUESTION THREE (20 MARKS)

- a) Describe the four kinds of database classification of (12 Marks)
b) Using a diagram, describe the Tree / Hierarchical data Structure (8 Marks)

QUESTION FOUR (20 MARKS)

- a) Discuss five research Organizations at regional and international level that produce agricultural information (10 Marks)
b) Explain five areas where a combination of Global Positioning system (GPS), Geographic Information System (GIS) and Remote Sensing (RS) can be applied in modern agriculture (10 Marks)

QUESTION FIVE (20 MARKS)

- a) Discuss five advantages of Database Management System (DBMS) over File System (10 Marks)
b) Discuss any five challenges encountered when working with a Database Management System (DBMS) (10 Marks)