



MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF AGRICULTURE, ENVIRONMENT AND HEALTH SCIENCES

DEPARTMENT OF AGRICULTURAL SCIENCES

FOURTH YEAR FIRST SEMISTER EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

AEE 413: AGRICULTURAL INFORMATION MANAGEMENT

DATE: 22/8/2022

TIME: 8.30-10.30 AM

INSTRUCTIONS: Answer question ONE and any other TWO questions

QUESTION ONE: COMPULSORY: (30 MARKS)

- a) Explain the meaning of agricultural information system (2 marks)
- b) Explain the meaning of the following terms used to categorize networks in agricultural information system management
 - i. Topology (3 marks)
 - ii. Protocol (3 marks)
 - iii. Architecture (3 marks)
- c) Differentiate between the following terms
 - i. Memory and intelligence (2 marks)
 - ii. Learning and experience (2 marks)
- d) With an aid of a well labelled diagram, illustrate the relationship between Data, information, knowledge and wisdom (4 marks)
- e) Describe four resources required in managing agricultural information (4 marks)
- f) Explain the three broad categories of an agricultural Information system (3 marks)
- g) Explain two differences between agricultural business information system and office information system (4 marks)

QUESTION TWO (20 MARKS)

- a) Explain Four basic functions of an agricultural information system (8 marks)
- b) Describe the components of a computer- based agricultural information system (12 marks)

QUESTION THREE (20 MARKS)

- a) Explain three agricultural information system performance and standards that can be used to measure success of the system (6 marks)
- b) With an aid of a diagram describe the process of designing agricultural information system solution in an organization (14 marks)

QUESTION FOUR (20MARKS)

- a) Describe any five trends in development of information systems from 1950 to 2000 (10 marks)
- b) For each of the trends described in (a), discuss one role of the information Systems (10 marks)

QUESTION FIVE (20 MARKS)

- a) Explain the meaning of geographic information system. (2 marks)
- b) Describe five benefits of using GIS (7 marks)
- c) Giving one example in each case, discuss the role of ICT in agriculture production information management (11 marks)