



# MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

SECOND YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

AEE 301: AGRICULTURAL EXTENSION AND TECHNOLOGY TRANSFER

DATE: 31/5/2022

TIME: 8.30-10.30 AM

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## INSTRUCTIONS:

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

### SECTION A: COMPULSORY: (30 MARKS)

#### QUESTION ONE (30 MARKS)

- a) Explain the meaning of the following concepts as they apply to agricultural development:
  - i. shared agricultural extension services
  - ii. agricultural innovation system
  - iii. technology transfer
  - iv. agricultural project
  - v. agricultural innovation platform (5 marks)
- b) Explain the five major transitions needed to ultimately influence the productivity and sustainability of agricultural technology transfer in the research and development system in developing countries. (5 marks)
- c) Tabulate five differences between formal education and extension education. (5 marks)
- d) Explain five strengths of the Farmer Field School approach in agricultural technology transfer. (5 marks)
- e) Give any five reasons why contemporary agricultural directorates in developing countries should be concerned with innovative extension approaches. (5 marks)

- f) Explain five benefits of resource mobilization for agricultural extension services at the county levels in Kenya. (5 marks)
- g) Explain at least five issues that hinder Information and Communication Technologies (ICTs) use in agricultural technology transfer in Kenya. (5 marks)
- h) Suggest five interventions that could be deployed to promote strong linkages amongst the multiple stakeholders in food systems to promote agricultural technology transfer in Kenya. (5 marks)

## **SECTION B (40 MARKS)**

**Answer any two questions from this section**

### **QUESTION TWO (20 MARKS)**

- a) Discuss five common obstacles that have hindered the realization of effective agricultural extension systems in Kenya. (10 marks)
- b) Suggest five reforms that could revitalize the Kenyan public extension system to make more responsive in agricultural technology transfer. (10 marks)

### **QUESTION THREE (20 MARKS)**

- a) Justify the need for standards and guidelines in the provision of agricultural extension services in Kenya. (10 marks)
- b) Discuss at least five objectives of the Standards and Guidelines for Agricultural Extension and Advisory Services as developed in 2017 by the Ministry of Agriculture Livestock Fisheries and Cooperatives. (10 marks)

### **QUESTION FOUR (20 MARKS)**

- a) Discuss the five objectives of institutionalizing agricultural extension at the county level in Kenya. (10 marks)
- b) Discuss the steps that one could follow to write a comprehensive agricultural extension programme for any County in Kenya. (10 marks)

### **QUESTION FIVE (20 MARKS)**

- a) Present a credible argument for the privatization of agricultural extension services in Kenya. (10 marks)
- b) Discuss the suitability of innovation platforms for agricultural technology transfer among smallholder farmers in the country. (10 marks)