



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF AGRICULTURAL AND FOOD SCIENCES
THIRD YEAR SECOND SEMESTER UNIVERSITY EXAMINATION FOR THE
DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND
EXTENSION

2024/2025 ACADEMIC YEAR

SIAYA

COURSE CODE: AEB 1314

COURSE TITLE: Agricultural Extension and Technology Transfer

EXAM VENUE: Siaya Campus

Stream: BSc. AGED Y3

DATE:

Exam Session:

TIME: 2 HOURS

Instructions:

- 1. Answer ALL questions in section A (compulsory) and ANY other TWO questions in Section B.**
- 2. Candidates are advised NOT to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

SECTION A: [30 marks: Each question is equivalent to 1.5 marks]

Answer ALL Questions in this section

1. What is the primary goal of agricultural extension?
 - a) To control government policies on farming
 - b) To sell agricultural inputs
 - c) To educate farmers and improve agricultural productivity
 - d) To promote only organic farming

2. The main role of an agricultural extension officer is to:
 - a) Greeting farmers every morning
 - b) Supply farm inputs at subsidized prices
 - c) Conduct research on crops and livestock
 - d) Transfer knowledge and skills to farmers

2. Which of the following is NOT a method of agricultural extension?
 - a) Farmer field schools
 - b) Demonstration plots
 - c) Traditional storytelling
 - d) Mass media campaigns

3. The process of spreading agricultural innovations to farmers is known as:
 - a) Innovation diffusion
 - b) Agricultural mechanization
 - c) Agribusiness development
 - d) Market expansion

4. Which of the following is a challenge in agricultural extension services?
 - a) High literacy levels among farmers
 - b) Poor infrastructure and lack of access to information
 - c) High government funding for extension services
 - d) Over-reliance on traditional farming methods

6. Technology transfer in agriculture refers to:
 - a) The movement of people from rural to urban areas
 - b) The application of scientific research findings to practical farming
 - c) The selling of tractors and farming equipment
 - d) The replacement of farmers with robots

7. From the options below, select an example of agricultural technology transfer?
 - a) Farmers using a mobile app to access weather forecasts
 - b) Selling farm produce at a local market
 - c) Importing food products from other countries
 - d) Writing academic reports on farming

8. One of the major barriers to technology adoption among small-scale farmers is:
 - a) Availability of extension services
 - b) High costs of new technologies
 - c) Farmer cooperatives
 - d) Government support

9. Choose an organizations commonly involved in agricultural technology transfer?
 - a) The International Monetary Fund (IMF)
 - b) The World Trade Organization (WTO)
 - c) The World Health Organization (WHO))
 - d) The Food and Agriculture Organization (FAO)
10. The use of mobile phones for agricultural extension is an example of:
 - a) Face-to-face training
 - b) Digital extension methods
 - c) Manual data collection
 - d) Conventional extension services
11. A participatory extension approach involves:
 - a) Extension officers making all farming decisions for farmers
 - b) Farmers actively engaging in decision-making and problem-solving
 - c) Government controlling all extension services
 - d) Use of only one method of extension
12. Select from the choices below, a group extension method?
 - a) One-on-one farm visits
 - b) Field days and farmer training workshops
 - c) Radio advertisements
 - d) Newspaper articles
13. The Training and Visit (T&V) System of extension is based on:
 - a) Farmers training other farmers without external assistance
 - b) Regular training of extension workers who then pass knowledge to farmers
 - c) Selling extension services to farmers
 - d) Extension officers visiting farmers only when they need help
14. One of the following choices is NOT a characteristic of an effective extension service?
 - a) It is farmer-centred
 - b) It promotes new and useful agricultural technologies
 - c) It is accessible to all farmers
 - d) It excludes traditional farming practices
15. The Farmer Field School (FFS) approach focuses on:
 - a) Teaching farmers through classroom lectures only
 - b) Encouraging learning by doing through on-farm experiments
 - c) Restricting farmers from using indigenous knowledge
 - d) Providing financial loans to farmers
16. The biggest limitation of face-to-face agricultural extension is:
 - a) It allows direct interaction with farmers
 - b) It is expensive and time-consuming
 - c) It does not require trained extension officers
 - d) It is only used in urban areas
17. Select an emerging trend in agricultural extension?
 - a) Complete elimination of extension officers

- b) Use of ICT-based solutions like mobile apps and social media
 - c) Only relying on television for agricultural training
 - d) Restricting technology transfer to commercial farmers
18. Which factor contributes to low adoption of agricultural innovations?
- a) Government incentives for farmers
 - b) High costs and lack of access to new technologies
 - c) Strong support from farmer groups
 - d) Availability of agricultural extension officers
19. One way to ensure the success of agricultural technology transfer is to:
- a) Ignore farmers' traditional knowledge and practices
 - b) Involve farmers in the process of developing new technologies
 - c) Make all extension services free without farmer input
 - d) Use only one extension approach for all farmers
20. In the future, agricultural extension is expected to:
- a) Shift towards digital and technology-based solutions
 - b) Completely eliminate the need for extension officers
 - c) Focus only on large-scale commercial farmers
 - d) Reduce collaboration with research institutions

SECTION B: [40 marks]

Answer ANY TWO questions from this section

1. a) Discuss any five determinants of rate of adoption. [10 marks]
 b) One of the core principles of the farmer field school (FFS) approach states that: "Empowerment comes from collective action". Discuss. [10 marks]
2. Demonstrate how Information and Communication Technologies (ICTs) are transforming agricultural extension services. [20 marks]
3. With relevant examples, explain why private extension may be encouraged in Kenya if the expected goals of agricultural extension service are to be achieved. [20 marks]
4. Describe the challenges faced in agricultural technology transfer in developing countries and propose possible solutions for each. [20 marks]