



# MACHAKOS UNIVERSITY

University Examinations for 2022/2023 Academic Year

SCHOOL OF AGRICULTURE, ENVIRONMENT AND HEALTH SCIENCES

DEPARTMENT OF AGRICULTURAL SCIENCES

SECOND YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (AGRIBUSINESS MANAGEMENT AND TRADE)

**AGB 409: AGRICULTURAL INNOVATIONS MANGEMENT AND INTELLECTUAL  
PROPERTY RIGHTS**

**DATE:**

**TIME:**

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**INSTRUCTION:** Answer Question One (Compulsory) and Any Other Two Questions.

**QUESTION ONE: COMPULSORY (30 MARKS)**

- a) Using empirical examples define the following terms
- i. Innovation (2 marks)
  - ii. Innovation systems (2 marks)
  - iii. National innovation systems (2 marks)
  - iv. Intellectual property rights (2 marks)
  - v. Agricultural knowledge systems (2 marks)
- b) What are the important principles of an agricultural innovation system (6 marks)
- c) What factors influence adoption of agricultural innovations (8 marks)
- d) Describe three innovations strategies used in Kenya to develop agricultural technologies (6 marks)

**QUESTION TWO (20 MARKS)**

- a) Describe five phases involved in establishment an innovation platform (10 marks)
- b) Using an illustration, describe innovation platform for technology adoption approach (10 marks)

**QUESTION THREE (20 MARKS)**

- a) Discuss the role of research and development in promoting agricultural innovations (5 marks)
- b) Describe the pillars of capturing value for agricultural innovations (5 marks)
- c) Describe five priority sectors for the science, technology and innovation policy (10 marks)

**QUESTION FOUR (20 MARKS)**

- a) Describe four ways that are used to protect intellectual property or an idea (8 marks)
- b) i. Differentiate between the National Agricultural System (NARS), Agricultural Knowledge Systems and Agricultural Innovation Systems (AIS). (2 marks)
- ii. In each category shown in (bi), describe the stakeholders, organization, approaches, roles, capacities and outcomes (10 marks)

**QUESTION FIVE (20 MARKS)**

- a) Discuss the role of a policy in promoting agricultural innovations and technologies (5 marks)
- b) i. Explain five main challenges facing cassava value chain in Machakos County (5 marks)
- ii. Explain how the innovation platform approach could be applied to address the challenges and upgrade cassava value chain (10 marks)