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JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY SCHOOL OF AGRICULTURAL AND FOOD SCIENCES UNIVERSITY EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN AGRICULTURAL EXTENSION

1ST YEAR SEMESTER ONE 2023/2024 ACADEMIC YEAR

COURSE CODE: AAE 5114:

COURSE TITLE: AGRICULTURAL PRODUCTION SYSTEMS

DATE: TIME:

TIME: 3 HOURS

REGULAR EXAMS

INSTRUCTIONS

- 1. Answer Question **ONE** (**Compulsory**) and Question Two (**Compulsory**) in Section A and any other **TWO** Questions from 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

- Q1. Agricultural production systems can be classified according to the following general categories. Using examples explain the following terms:
 - a) Subsistence farming.
 - b) Nomadic farming.
 - c) Arable farming.
 - d) Plantation or tree crop farming.
 - e) Mixed farming.

(10 Marks)

- Q2. Environmental issues impact agricultural production. Explain how the following environmental issues affect agricultural production.
 - a) Global warming
 - a) Tropical deforestation
 - b) Water-use issues
 - c) Desertification
 - d) Livestock-wildlife Conflict.

(10 Marks)

SECTION B

- Q 3. Explain how the following Ecological conditions affect agricultural production:
 - a) Agro-ecological zones
 - b) Climate
 - c) Water and nutrient cycles

(20

Marks)

- Q4. Ecological interactions are useful in understanding agricultural production:
 - a) Plants/animals/environment
 - b) Competition
 - c) Complementarity
 - d) Energy flows

(20 Marks)

- Q5. Explain how the four (4) factors of production affect agricultural production (20 Marks)
- Q6. Explain the following terms in relation to biodiversity:
 - a) Molecular basis of biodiversity
 - b) Animal and plant genetic resources
 - c) Utilization and conservation of genetic resources

(20 Marks)