



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF AGRICULTURAL AND FOOD SCIENCES

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
FOOD SECURITY**

4TH YEAR 2ND SEMESTER 2020/2021 ACADEMIC YEAR

REGULAR

MARKING SCHEME

COURSE CODE: AAS 3427

COURSE TITLE: Apiculture and Aquaculture

EXAM VENUE:

STREAM: BSc. (Food Security)

DATE:

EXAM SESSION:

TIME:

Instructions:

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

SECTION A (30 MARKS)

Answer ALL questions in this section

1. Define bee space and its significance for the African honey bee, *Apis mellifera*.
(3marks)
2. Provide the following information on *Rastrineobola argetea*?
 - i). The local and english names. (2marks)
 - ii). Geographiical location. (2marks)
 - iii). The niche. (2marks)
 - iii). Major uses. (2marks)
3. Name three types of fish based on their niches in various aquatic environments.
(6marks)
4. How can pond aquaculture production be increased simply, without high-tech input?
(4marks)
5. Explain why most marine fisheries are based near the coast. (3marks)
6. State the maximum distance covered by bees in search of food and other materials.
(3marks)
7. Distinguish between Capture and Culture fisheries. (3marks)

SECTION B: (40 MARKS)

Answer ANY TWO questions from this section

- 8a). To the lay persons, all insects are generally perceived to be harmful or noxious. Explain, giving examples why this is not necessarily so. (7.5marks)
- b). Distinguish between finfish and shellfish. (5marks)
- c). Distinguish among queen, drones and worker bees in a colony of the African honeybee, *Apis mellifera*. (7.5marks)
- 9a). Describe, giving examples, the following types of culture: monoculture, polyculture and integrated aquaculture. (16marks)
- b). Name four important hive pests. (4marks)
- 10a). Explain the causes of swarming and how this phenomenon can be minimized or prevented in the African honey bee, *Apis mellifera*. (10marks)
- b). Name five commercial hive products. (5marks)
- c). Giving examples, state three qualities of a good aquaculture species. (5marks)