



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**

3RD YEAR 2ST SEMESTER 2020/2021 ACADEMIC YEAR

REGULAR

COURSE CODE: AAS 3327

COURSE TITLE: Apiculture and Sericulture

EXAM VENUE:

**STREAM: BSc. (Food Security & Animal
Science)**

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. Briefly explain why insects are underappreciated despite their role in the food web. (6marks)
2. Define the term sericulture. (6marks)
3. Explain why sericulture is also described as an agro-industry activity. (6marks)
4. Enumerate three benefits of sericulture technology. (6marks)
5. Briefly explain:
 - a) The only occasions when the queen leaves the hive. (2marks)
 - b) The number of sterile female bees in a bee colony in good condition. (2marks)
 - c) The number of fertile female bees in a hive. (2marks)

SECTION B: (40 MARKS)

Answer ANY TWO questions from this section

- 1a. Enumerate all the activities in silkworm (*Bombyx mori*) rearing for silk cocoons. (10marks)
- b). Giving examples state two special attributes of wild silk. (4marks)
- c). Explain the following;
 - i). the purpose (wisdom) of the *B. mori* silkworm cocoon. (3marks)
 - ii). *B. mori*'s high fecundity with respect to the number of eggs laid per female moth. (3marks)
- 2a). Distinguish among the Langstroth, Top Bar and Log Wood hives and briefly explain how they function in beekeeping. (15marks)
- b). Name five benefits from engaging sericulture as an economic activity. (5marks)
- 3a). Explain the causes of swarming and how it can be minimized/prevented in the African honey bee, *A. mellifera*. (11marks)
- b). Briefly explain the following:

- a). silkworm, (*B. mori*) is monophagous. (3marks)
- b). silkworm, (*B. mori*) is holometabolous. (3marks)
- c). the life cycle of *B. mori*. (3marks)