KISII UNIVERSITY

UNIVERSITY EXAMINATIONS

FOURTH YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN ANIMAL SCIENCE

SECOND SEMESTER 2024/2025

[JANUARY – APRIL, 2025]

ANSC 466: APICULTURE AND SERICULTURE

STREAM: Y4 S2 **TIME: 2 HOURS**

DAY: WEDNESDAY, 9:00 - 11:00 A.M. **DATE: 09/04/2025**

INSTRUCTIONS:

1. Do not write anything on this question paper.

2. Answer question ONE (Compulsory) and any other TWO questions.

1 a) Differentiate between

i) Reproductive and absconding swarm (2 marks)
ii) Waggle dance and round dance (2 marks)
iii) Tasar and Mori silkworm (2 marks)
iv) Reeling and brushing (2 marks)

b) Explain the following concepts as used in Apiculture and sericulture

i) Bee space (2 marks)
ii) Cocoon (2 marks)

c) Describe the regions where the following bees and silkworms are found

i) *Apis mellifera sahariensis* (4 marks)
ii) *Apis mellifera yemenitica*
iii) *Apis mellifera adansonii*

d) Explain why silk is referred to as 'Queen of textiles' (4 marks)

e) Highlight the factors influencing the quality of honey (5 marks)

f) Analyse the effects of climate change on honey bee foraging behaviour and colony health (5 marks)

2. a) Describe the steps involved in the production of silk from Mulberry silkworm (10 marks)

b) Highlight the economic importance of silkworm rearing (5 marks)

3. Describe the life cycle of *Apis mellifera* (15 marks)

4. a) Evaluate the impact of Varroosis on honeybee populations and discuss its symptoms, mode of transmission and effects on colony health and productivity.

(10 marks)

b) Propose an Integrated Pest Management (IPM) strategy to effectively manage Varroa mite infestation. (5mks)