

THE BRITISH BEEKEEPERS' ASSOCIATION

Founded in 1874

Registered Charity No. 212025

EXAMINATION FOR PROFICIENCY IN APICULTURE

MODULE 3 HONEY BEE DISEASES, PESTS AND POISONING

10th November 2018 Time Allowed 1½ hours

Candidate Number:

Instructions to Candidates

Read the questions carefully. Answer All Sections. It is recommended not to spend more than 10 minutes on Section A, 50 minutes on Section B and 30 minutes on Section C.

Unless stated otherwise questions apply to honey bees.

Use **BLACK** pen for text. **Black** pencil may only be used for diagrams. **DO NOT USE COLOURS.**

Examiner Use Only

Question	Sec A	B11	B12	B13	B14	B15	C16	C17	Total
Mark									
Moderated									

SECTION A (10 marks, 1 for each question)

Answer **ALL** the questions in this section. Use one or two word or short phrase answers. Please write your answers on the question paper.

- Q1 Give the scientific name of the Asian hornet.
- Q2 Name one **field crop** which may be sprayed with a chemical harmful to bees.
- Q3 Which organ may be infected with amoeba?
- Q4 Give one difference in the appearance of varroa and braula.
- Q5 Name a pest which may attack hives over winter.
- Q6 What disease is associated with Nosema in queen rearing enterprises?
- Q7 Give the scientific name of the greater wax moth.
- Q8 Name a notifiable honey bee disease.
- Q9 What is the maximum size hole or slot that will keep mice out of hives in winter?
- Q10 What type of organism causes chalk brood?

PLEASE HAND IN THIS SHEET AT THE END OF THE EXAMINATION

MODULE 3 HONEY BEE DISEASES, PESTS AND POISONING

10th November 2018

SECTION B (60 marks, 15 for each question)

Answer any **FOUR** questions from this section. Write short notes for your answers.

Marks

- | | | | |
|-----|-----|---|----|
| Q11 | (a) | Give the cause of sac brood. | 1 |
| | (b) | List the signs of the disease. | 5 |
| | (c) | Briefly describe how sac brood develops in an individual bee. | 7 |
| | (d) | How could the beekeeper deal with this disease? | 2 |
| Q12 | (a) | Explain how to fumigate comb using ethanoic (acetic) acid. | 10 |
| | (b) | What safety precautions should be taken. | 5 |
| Q13 | (a) | How would a beekeeper recognise the different stages of small hive beetle in a hive? | 10 |
| | (b) | What action should be taken if the beekeeper suspects the presence of small hive beetle? | 5 |
| Q14 | (a) | Name the two types of Nosema. | 2 |
| | (b) | What constitutes a suitable sample of bees to test for the presence of Nosema and why? | 4 |
| | (c) | List the steps of a laboratory method used to confirm the presence of Nosema in a sample of bees. | 9 |
| Q15 | (a) | Give three reasons for carrying out a Bailey Comb Change. | 3 |
| | (b) | Describe how to carry out a Bailey Comb Change in a weak colony. | 12 |

SECTION C (30 marks)

Answer **ONE** question from this section. Give *labelled* diagrams where applicable.

- | | | | |
|-----|-----|---|----|
| Q16 | (a) | Give the scientific names for the causative organisms of American Foul Brood and European Foul Brood | 2 |
| | (b) | Detail the signs of EFB. | 8 |
| | (c) | Detail the signs of AFB. | 7 |
| | (d) | How can the beekeeper help to prevent the spread of these diseases? | 13 |
| Q17 | (a) | Describe the lifecycle of <i>Varroa destructor</i> . | 10 |
| | (b) | Explain how to monitor varroa levels in a colony using the natural mite drop and the drone uncapping methods. Give the advantages and disadvantages of each method. | 20 |