

THE BRITISH BEEKEEPERS' ASSOCIATION

Founded in 1874 Registered Charity No. 212025

EXAMINATION FOR PROFICIENCY IN APICULTURE

MODULE 3 HONEYBEE DISEASES, PESTS AND POISONING

Candidate Number:

12th November 2016 Time Allowed 1½ hours

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 Honeybees.

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 How is American Foul Brood positively diagnosed in the field?
- Q2 Name an insect which steals food from the honeybee.
- Q3 Give the scientific name of a fungus causing a brood disease.
- Q4 Who should the grower contact if using a poisonous substance to spray a crop?
- Q5 Single cells or patches of brood with uncapped brood cells can be a sign of
- Q6 Name a pest that could be an issue in the honeybee colony during autumn and winter.
- Q7 Give one action a beekeeper can take when advised of crops being sprayed.
- Q8 What is the recommended number of bees used to make a diagnosis of nosema?
- Q9 Which disease is associated with Black Queen Cell Virus?
- Q10 Why are Apistan and Bayverol no longer widely utilized for Varroa treatment?

PLEASE HAND IN THIS SHEET AT THE END OF THE EXAMINATION

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SECTION B (60 marks, 15 for each question)

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

Marks

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|-----|-----|--|----|
| Q11 | (a) | Fill in the empty spaces in the table provided. | 10 |
| | (b) | What effect does Nosema have on the individual bee? | 5 |
| Q12 | (a) | State how to recognise the features and signs of the small hive beetle in the egg and larval stage of its life cycle in and around a bee hive. | 10 |
| | (b) | Describe the features of the adult small hive beetle. | 5 |
| Q13 | (a) | List 5 safety steps when using ethanoic (acetic) acid for fumigating combs. | 5 |
| | (b) | Describe briefly a method for fumigation of brood comb. | 8 |
| | (c) | What are the benefits of using ethanoic (acetic) acid in beekeeping? | 2 |
| Q14 | (a) | Give a brief description of the life cycle of the greater wax moth. | 10 |
| | (b) | How would wax moth within a colony be identified during an inspection? | 5 |
| Q15 | (a) | How would a beekeeper recognise chalk brood? | 6 |
| | (b) | How does this differ from stone brood? | 2 |
| | (c) | What factors are known to increase the chances of the presence of chalk brood? | 4 |
| | (d) | What action can a beekeeper take to reduce chalk brood in a hive? | 3 |

SECTION C (30 marks)

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

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|------|-----|---|----|
| Q16 | (a) | Describe in detail the development of European Foul brood in a honeybee. Include the name of the causative organism. | 16 |
| | (b) | Describe in detail the signs of EFB in a colony of honeybees. | 9 |
| | (c) | Under what circumstances is EFB most likely to be visible to the beekeeper? | 5 |
| Q 17 | (a) | Describe, in detail, the life cycle of <i>Varroa destructor</i> . Include ways this pest moves from one colony to another without human intervention. | 16 |
| | (b) | Describe the artificial swarm and shook swarm methods of reducing mite numbers. | 14 |

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11 (a) Fill in the empty spaces in the table below.

10

	ACARINE	AMOEBEA
Scientific name		
Specific place enters honey bee		
Age of honey bee when infestation occurs		
Specific location where disease multiplies		
How is the diagnosis made		

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