

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:

14th November 2015 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 or 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 What is the maximum recommended size for a hole in a mouse guard?
- Q2 What is the scientific name for the lesser wax moth?
- Q3 Give one organic acid authorised by the Veterinary Medicines Regulations 2013, for the treatment of Varroa in the UK
- Q4 Which organ is affected by amoeba?
- Q5 Which pest is associated with bald brood?
- Q6 What legislation covers the importation of honey bees into the UK?
- Q7 Give one immediate measure is to be taken if European Foul Brood or American Foul brood is suspected.
- Q8 With which pathogen might pesticide poisoning be confused, from the appearance at the hive entrance?
- Q9 What is the Beltsville test for?
- Q10 Give the scientific name for the causative organism of acarine.

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

- Q11 (a) Other than Chronic Bee Paralysis Virus list 4 viruses which may affect honey bees. 4
(b) List the signs caused by any 3 of these viruses, indicating any associated disease or pest where relevant. 9
(c) What measures can the beekeeper take to reduce the incidence and impact of viral diseases in the colony? 2
- Q12 (a) Why is regular brood comb change important? 3
(b) Give the scientific name for chalk brood and identify what organism it is. 2
(c) How does chalk brood affect a honeybee larva, and how is it spread within the colony? 5
(d) List the measures which the beekeeper can take to reduce the incidence of chalk brood. 5
- Q13 (a) Give the scientific names of the causative organisms of notifiable diseases and the pests in the UK. 4
(b) List the physical characteristics of:
i) the larval forms of the small hive beetle (SHB); 3
ii) the adult forms of the SHB. 3
(c) Where does the pupation stage of the SHB take place? 1
(d) List 4 possible ways in which the SHB is likely to enter the UK? 4
- Q14 (a) Notification has been given that pesticide spraying will take place near an apiary within the next 48 hours. What measures could be taken to reduce the risk of harm to the bees? 4
(b) List four signs that would be seen if the bees had been affected by pesticide poisoning? 4
(c) What measures should be taken in the event of suspected poisoning? 6
(d) With which virus infection might pesticide poisoning be confused from the appearance at the hive entrance? 1
- Q15 (a) Make a table comparing and contrasting the signs of EFB and AFB as seen on a frame of brood. 10
(b) What is the significance of a spore producing bacterium? 1
(c) List 4 possible ways in which these diseases might be transmitted between apiaries. 4

SECTION C (30 marks)

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

- Q16 (a) What would arouse suspicions that a colony might be infected with Nosema? 5
(b) Outline the lifecycle of Nosema indicating in your answer how it is transmitted within the colony and the effects on the individual bee and the colony. 13
(c) Describe in detail the management of a weak colony with a heavy infection of Nosema. 12
- Q17 (a) What is meant by the term Integrated Varroa Management (IVM)? 4
(b) Excluding the artificial swarm method list 7 approved techniques/methods and the months in which they are most appropriately used in implementing IVM in the UK. 14
(c) Describe in detail how to utilise the artificial swarm method for Varroa control. 12