

THE BRITISH BEEKEEPERS' ASSOCIATION

Founded in 1874

Registered Charity No. 212025

EXAMINATION FOR PROFICIENCY IN APICULTURE

MODULE 3 HONEYBEE DISEASES, PESTS AND POISONING

21st March 2015 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 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 Give the scientific name of the causative organism of American Foul Brood.
- Q2 What is the recommended sample size needed for diagnosis of Nosema in worker.
- Q3 Name the organ in the honeybee that can be attacked by *Acarapis woodi*.
- Q4 Name the Statutory Order that relates to Tropilaelaps.
- Q5 Give the scientific name of the Asian Hornet.
- Q6 What is the common name for *Achroia grisella*?
- Q7 What is the maximum height of a slot when used as a mouse guard for winter?
- Q8 Name one distinguishing anatomical feature of the adult small hive beetle.
- Q9 At what stage does *Melissococcus plutonius* normally kill a honeybee?
- Q10 Hard white, black or grey "pellets" are found on the hive floor. What is this a sign of?

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 If *Aethina tumida* was suspected in your apiary explain,
- (a) What device should be used to detect the adult? 1
 - (b) How can *Aethina tumida* be identified? 4
 - (c) What actions should be taken by the beekeeper? 5
 - (d) What could be the consequences to the beekeeper if it was discovered? 5
- Q12
- (a) Label A, B, C, D on the diagram provided. 4
 - (b) Indicate on the diagram where any disease forming organisms might be found, giving the name of the organ and the relevant disease. 4
 - (c) Give details of how these organisms would affect the worker honeybee. 4
 - (d) How are these diseases transmitted and what is the agent of transmission? 3
- Q13
- (a) With the aid of a table list the differences between *Varroa destructor* and *Braula coeca*. 3
 - (b) Why might beekeepers consider *Braula coeca* to be a pest in honeybee colonies? 1
 - (c) Describe the appearance of healthy sealed and unsealed brood. 6
 - (d) How would this appearance change if there were signs of parasitic mite syndrome. 5
- Q14
- (a) What are the statutory requirements relating to the importation of honeybees into the UK from States of the European Union? 12
 - (b) Name a non EU countries from which bees can be imported to the UK. 1
 - (c) Where a beekeeper receives a consignment of queen honey bees from a non EU country, name two actions which must be taken by the consignee. 2
- Q15
- (a) What are the signs of American Foul Brood? 5
 - (b) Why is AFB considered a notifiable disease? 1
 - (c) What is the treatment or management for AFB in the UK? 2
 - (d) EFB is also a notifiable disease. List the signs and how this disease can be confirmed in the field. 8

SECTION C (30 marks)

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

- Q16 Deformed wing virus and chronic bee paralysis virus can affect the honeybee colony. Discuss the effect of these two viruses. Use the following headings for each of the viruses: the age at which the bee is affected, the clinical signs, the effect on the colony, the methods of transmission and the remedial actions which can be taken by the beekeeper to minimise the effects of these viruses. 30
- Q17
- (a) Varroosis has spread quickly through the UK. Explain the reasons for this spread, how the population of the mite increases in the colony, why regular monitoring is necessary before and after treatment, and the problems caused by continued use of one acaricide. 20
 - (b) Other than queen trapping, describe two non chemical methods for managing a colony to reduce the level of Varroa in the colony 10

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- Q12 (a) Label A, B, C, D on the diagram below. 4
- (b) Indicate on the diagram where any disease forming organisms might be found, giving the name of the organ and the relevant disease. 4
- (c) Give details of how these organisms would affect the worker honeybee. 4
- (d) How are these diseases transmitted and what is the agent of transmission? 3

