THE BRITISH BEEKEEPERS' ASSOCIATION

Founded in 1874 Registered Charity No. 212025

EXAMINATION FOR PROFICIENCY IN APICULTURE

MODULE 3 HONEYBEE DISEASES, PESTS AND POISONING

22nd March 2014 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 Name one non-pyrethroid approved treatments for *Varroa destructor* which is licensed for use by the Veterinary Medicines Directive. ……

Q2 Give one product for preventing wax moth in stored comb. ……

Q3 Give the scientific name of the causative organism of chalk brood. ……..

Q4 At what stage in the life cycle of the honeybee, may it exhibit the signs of sacbrood? ……..

Q5 Name one **field crop** which may be sprayed with a chemical harmful to bees. ……...

Q6 To what size should an entrance be reduced to exclude mice in winter? ……..

Q7 What type of organism is Nosema? ……

Q8 What is the scientific name for the Greater Wax Moth? ……

Q9 What organism causes deformed wings in adult bees? ……

Q10 What magnification is required to diagnose the presence of Nosema under a microscope? ……

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*

11	(a)	List the characteristics of the Asian Hornet (*Vespa velutina*)	5
	(b)	Describe the appearance of the adult and larval forms of the small hive beetle (*Aethina tumida*.)	6
	(c)	*Tropilaelaps* is a Notifiable pest in the UK.	
		(i) What distinguishing features does it have?	2
		(ii) How may *Tropilaelaps* be detected in the hive?	2
12	(a)	Name two methods of transferring a colony on to clean brood combs.	2
	(b)	List the steps to be taken for one of these methods.	10
	(c)	Why is such a transfer desirable?	3
13	(a)	What is *Acarapsis woodii* and what condition does it cause in the honeybee?	2
	(b)	Briefly describe the process used to diagnose the presence of *Acarapsis woodii* in the honeybee.	10
	(c)	How would a colony be managed if this diagnosis is positive?	3
14	(a)	Describe how stored comb may be fumigated with ethanoic (acetic) acid, use labelled diagrams as appropriate.	12
	(b)	What precautions should be taken when using this product?	3
15	(a)	What legislation controls the importation of honeybees into the UK?	2
	(b)	What considerations have to be given when importing queens and attendant workers from within the EU?	13

SECTION C (30 marks)

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

16	(a)	Give the scientific names for the causative organisms of American Foul Brood and European Foul Brood.	2
	(b)	Compare and contrast the signs, diagnosis and actions to be taken for American Foul Brood and European Foul Brood.	28
17	(a)	Describe those features of *Varroa destructor* which enable it to thrive as a parasite of the honeybee.	5
	(b)	Describe the life cycle of *Varroa destructor* .	7
	(c)	Define the term integrated varroa management (IVM). Using a table, demonstrate the application of IPM to the control of *Varroa* within a honeybee colony throughout the year.	18