

## MODULE 6

### HONEYBEE BEHAVIOUR

#### SYLLABUS

##### Aims

The Modules are designed to give beekeepers who have passed the Basic Assessment the opportunity to study the craft of apiculture further with the goals of obtaining an Intermediate Theory Certificate for passing Modules 1 to 3 and any other module plus an Advanced Theory Certificate for passing Modules 1 to 3 and 5 to 8.

##### Conditions of Entry

The Candidate shall have passed the BBKA Basic Assessment or an equivalent Examination approved by the Board. The date when this certificate was obtained shall be entered on the application form.

The Candidate shall have kept and managed bees for at least 2 seasons. A statement to this effect, on the application form shall be signed by someone who is familiar with the Candidate's beekeeping.

A completed Application Form and fee shall have been received by the Local Examination Secretary at least six weeks before the date of the Assessment and this shall be received by the Secretary to the Board at least five weeks before the date of the Assessment.

##### Award of Certificates

A certificate will be awarded for each module passed and the pass mark will be 60% for all modules. (Credit 70%, Distinction 80%)

An Intermediate Theory Certificate will be awarded when modules 1, 2, 3 and one other have been passed. An Advanced Theory Certificate will be awarded when modules 1, 2, 3, 5, 6, 7 and 8 have been passed. For a beekeeper whose objective is to obtain the Advanced Certificate only, there is no requirement to pass module 4 as the items in this module are included in other modules.

In order to qualify for either an Intermediate or Senior Theory Certificate the necessary modules must be passed in a time period not exceeding 12 years.

The Master Beekeeper Certificate will be awarded automatically to a beekeeper who has obtained an Advanced Theory Certificate and the Advanced Certificate in Beekeeping Husbandry.

##### The Assessment

Each module shall consist of a written paper which shall be answered in a maximum of 1½ hours and shall have sections. **Candidates will be expected to use scientific names where applicable**

Two Examiners appointed by the Board mark each module. The marks given by the Examiners, marking independently, are scrutinised by the Moderator.

The final marks after moderation shall be sent by the Board Secretary to the Candidate.

## MODULE 6

### HONEYBEE BEHAVIOUR

The Candidate shall be able to give a detailed account of:-

- 6.1 the function and behaviour of the worker honeybee throughout its life including the types of work done, duration of work periods under normal circumstances and the variations in behaviour due to seasonal changes in the state of the colony;
- 6.2 the mating behaviour of the honeybee queen and drone including an account of the pheromones involved and the concept of drone congregation areas;
- 6.3 the queen honeybee's egg laying behaviour and its relationship to changing circumstances in the hive and external factors relating to climate and season;
- 6.4 the seasonal variations in the population size of a honeybee colony and an explanation of such variations;
- 6.5 the social organisation of the honeybee colony **including worker policing**;
- 6.6 the methods of communication used by the honeybee including food sharing (**trophallaxis**), dancing, scenting and vibration;
- 6.7 the behaviour of the foraging bee and its work methods in the field including orientation;
- 6.8 the behaviour of the worker bee towards intruders and the theories advanced to describe the means by which colonies recognise intruders;
- 6.9 the collection of nectar and water and their use by the colony;
- 6.10 the inter-relationship of nectar, honey and water in the honeybee colony;
- 6.11 the conversion of nectar to honey including the **hydrolysis** of sucrose, the evaporation of water, and the role of the honeybee in accomplishing these changes;
- 6.12 the collection, storage and use of pollen by the honeybee colony;
- 6.13 the collection and use of propolis by the honeybee colony;
- 6.14 the conditions leading to swarming;
- 6.15 the conditions leading to supersedure;
- 6.16 the behaviour of swarms and the method of selection by the swarm of a site for a new home;
- 6.17 the initiation of comb building and the construction of comb;
- 6.18 the colony in winter and summer with special reference to ventilation, humidity and temperature control (**homeostasis**);
- 6.19 **laying workers and drone laying queens and the conditions leading to their development**;
- 6.20 **the effects of pathogens and pests on bee behaviour**;
- 6.21 **the learning behaviour of honeybees**;

### **Arrangements**

The Assessment venue and the Invigilation are arranged by the Local Examination Secretary. Approval for these arrangements shall be obtained from the Secretary to the Board at least five weeks before the date of the Assessment.

### **Application to Enter**

These should be made through the Local Examination Secretary of the County Beekeeping Association or directly to the Secretary of the Board at the address given below. Applications are required at least six weeks before the date on which the Assessment is to be taken. Available dates for the Assessments will be announced in the Bee Press or may be obtained from the Board Secretary.

### **Application Form**

Every application must be accompanied by a completed Application Form together with the Assessment Fee. Cheques should be made payable to BBKA. The dates when any relevant certificates were obtained must be entered on the Application Form. Certificates should not be sent.

Ensure that the Certificate of Qualification on the application form is completed. This is not necessary for re-sits.

### **Assessment Fees**

The current fee for any Assessment may be obtained from the Secretary to the Board or the Local Examination Secretary.

## **AUTHORITY**

The above is issued by the BBKA Examinations Board and all communications in respect of the Assessments should be addressed to:

The Secretary  
BBKA Examinations Board  
National Beekeeping Centre  
Stoneleigh Park  
KENILWORTH  
Warwickshire  
CV8 2LG

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