

MODULE 4
INTERMEDIATE HONEYBEE BIOLOGY
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 4

INTERMEDIATE HONEYBEE BIOLOGY

The Candidate shall be able to give simple accounts of:-

- 4.1 the structure and function of the alimentary system;
- 4.2 the excretory, circulatory, respiratory and nervous systems including the sense organs;
- 4.3 the exocrine glands and their secretions including the hypopharyngeal, mandibular, Nasonov, sting and wax glands;
- 4.4 the storage of metabolites in the fat body;
- 4.5 metamorphosis in the honeybee including the duration of the stages of development of the larva and the pupa;
- 4.6 caste differentiation in female honeybees particularly with respect to feeding;
- 4.7 laying workers and drone laying queens and the conditions leading to their development;
- 4.8 the external structure of queen, worker and drone and the differences between them;
- 4.9 the structure and function of the mouth parts, legs, antennae, sting and wings of the adult honeybee;
- 4.10 the functions and behaviour of the worker honeybee throughout its life, including foraging behaviour and orientation;
- 4.11 the mating behaviour of the honeybee queen and drone;
- 4.12 parthenogenesis in the honeybee;
- 4.13 the seasonal variation in the population size of a honeybee colony including the effects of external factors and the egg laying behaviour of the queen;
- 4.14 the differences between summer and winter worker honeybees;
- 4.15 the organisation of a honeybee colony including the importance of pheromones, particularly queen substance, Nasonov pheromone and the two alarm pheromones;
- 4.16 methods of communication used by the honeybee including food sharing, dancing and scenting;
- 4.17 the collection of nectar and water and their use by the colony;
- 4.18 the conversion of nectar to honey and the inter-relationships of nectar, honey and water in the honeybee colony;
- 4.19 the processes of swarming and supersedure and the distinguishing features of swarm, supersedure and emergency queen cells;
- 4.20 one method of rearing queens suitable for use in an apiary of five to ten colonies;
- 4.21 methods of queen introduction, itemising necessary precautions;
- 4.22 the signs of queenlessness and a method of confirming the condition;
- 4.23 the methods of marking and clipping queens and the advantages and disadvantages of these practices.

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

published September 1995
revised April 1996
revised March 2001
major revision April 2004
revised April 2007