

**EXAMINATION BOARD FOR THE NATIONAL DIPLOMA IN BEEKEEPING AND THE
UNITED KINGDOM CERTIFICATE IN BEEKEEPING.**

MARCH, 1992.

PAPER 'A'.

Time allowed - 3 hours.

Instructions to Candidates:-

Time allowed - 3 hours.

ANSWER FOUR QUESTIONS ONLY.

All questions carry equal marks.

Marks will be deducted for irrelevancy and for faulty English.

Marks will be awarded for clear diagrams where relevant.

1. It has been stated that there is an optimum size of colony for good wintering. Discuss this statement and suggest why colonies smaller or larger than the optimum may not winter so successfully.
2. Describe fully how beekeeping can contribute to conservation, and how conservation can assist beekeeping.
3. An increasing number of new or alternative farm crops are being grown in the British Isles, particularly in the arable areas. Discuss why this is occurring, the crops used and the possible effects on beekeeping.
4. *"Simple sanitary precautions can be taken against all common infections (of the honey bee) except that by Acarapis woodi" L. Bailey.*
 - a) Discuss this statement.
 - b) Is it still true today?
 - c) Describe the "sanitary" precautions that can be taken.
5. You have been asked to install and maintain an observation hive in a primary school.
 - a) Describe how you would stock, install, and maintain the hive.
 - b) Outline the information you would give to the teacher in charge, of the use the hive could be put to in the teaching syllabus of the school.
6. Give an account of the advice you would give to an average beekeeper to deal with the following problems:-
 - a) The recovery and processing of supers of oil-seed rape honey that has granulated in the comb.
 - b) The requeening of a vicious stock.
 - c) A queenless colony that has developed laying workers.
7. You are to organise an Advanced Beekeeping Course lasting six days.
 - a) Construct a suitable programme listing the subjects to be covered.
 - b) Assuming sufficient funds name the specialist lecturers you would invite to lecture to the course on the subjects covered by your programme.
 - c) Describe how at the end of the course you would judge whether or not it had achieved its aims.

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ANSWER FOUR QUESTIONS ONLY.

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1. Write notes on the characteristics and geographical distribution of the following races of *Apis mellifera*:-
Apis mellifera mellifera; *Apis mellifera carnica*; *Apis mellifera scutellata*; and *Apis mellifera capensis*.
2. Discuss the place of water in the economy of the colony. Describe fully:-
 - a) How water is provided.
 - b) The origin of surplus water and how it is eliminated.
3. You have been provided with a sample of honey and have been asked to examine it for its pollen content:-
 - a) Describe fully how you would carry this out.
 - b) Describe with sketches the features that would enable you to recognise five of the common pollens that might be found in a sample of English honey.
4. Describe fully:-
 - a) The legislation that applies in England in respect of pests and diseases of the honey bee.
 - b) How the requirements of the legislation are implemented.
5. "*Today there are probably just four or five, but possibly six or more, living species of Apis.*" T.D. Seeley - "Honey bee ecology". Fully discuss this statement.
6. Write a short account of FIVE of the following:-
Juvenile hormone; Johnson's organ; *Phacelia tanacetifolia*; Oxytetracycline; ecdysis; oil-immersion lens; hydroxymethylfurfuraldehyde.
7.
 - a) Describe with diagrams the sting of the worker honey bee.
 - b) Briefly say how an allergy to bee venom can develop.
 - c) Describe the action necessary if a person suffers a severe reaction after receiving a sting.