

THE BRITISH BEEKEEPERS' ASSOCIATION

Founded in 1874

Registered Charity No. 212025

EXAMINATION FOR PROFICIENCY IN APICULTURE

MODULE 2 HONEYBEE PRODUCTS AND FORAGE

14th November 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 one use to which pollen may be put by humans.
- Q2 How does horse chestnut use colour to communicate information to bees?
- Q3 Give the melting point of beeswax.
- Q4 What is meant by the term thixotropic?
- Q5 What information can the microscopic examination of pollen in honey offer?
- Q6 Name one instrument used to measure the moisture content of honey.
- Q7 Name one way to remove cappings from combs, prior to extraction?
- Q8 Name one plant that produces nectar that is unpalatable to humans?
- Q9 What can be measured to indicate ash content in honey?
- Q10 Name a piece of equipment that can be used to recover wax from old comb.

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

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|-----|-----|---|----|
| Q11 | (a) | Give the judging criteria for a beeswax block. | 5 |
| | (b) | Describe the production of a beeswax block from clean, selected, dry cappings. | 10 |
| Q12 | (a) | Hygiene requirements state that you must make sure that your premises are kept clean. List these requirements. | 7 |
| | (b) | List the information which should appear on label of a jar of honey for retail sale in the UK. | 8 |
| Q13 | (a) | Briefly describe the factors affecting nectar secretion in plants. | 9 |
| | (b) | Plants fall into three main categories in terms of Nectar production: <ul style="list-style-type: none">• plants with nectar containing mostly sucrose;• plants with nectar containing a balance of sucrose fructose and glucose;• plants with glucose predominant nectar. Give an example of a plant yielding each type of nectar. | 3 |
| | (c) | List three factors affecting sugar concentration in nectar. | 3 |
| Q14 | (a) | Describe the two main types of small scale centrifugal honey extractor. | 7 |
| | (b) | Discuss the advantages and disadvantages of these two types of centrifugal extractor. | 8 |
| Q15 | (a) | Give the constituents, expressed in percentage terms, of a typical sample of UK summer floral honey. | 8 |
| | (b) | Identify three enzymes and their actions in a sample of floral honey. | 6 |
| | (c) | What is the allowable limit of hydroxymethylfurfural in floral honey in the UK? | 1 |

SECTION C (30 marks)

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

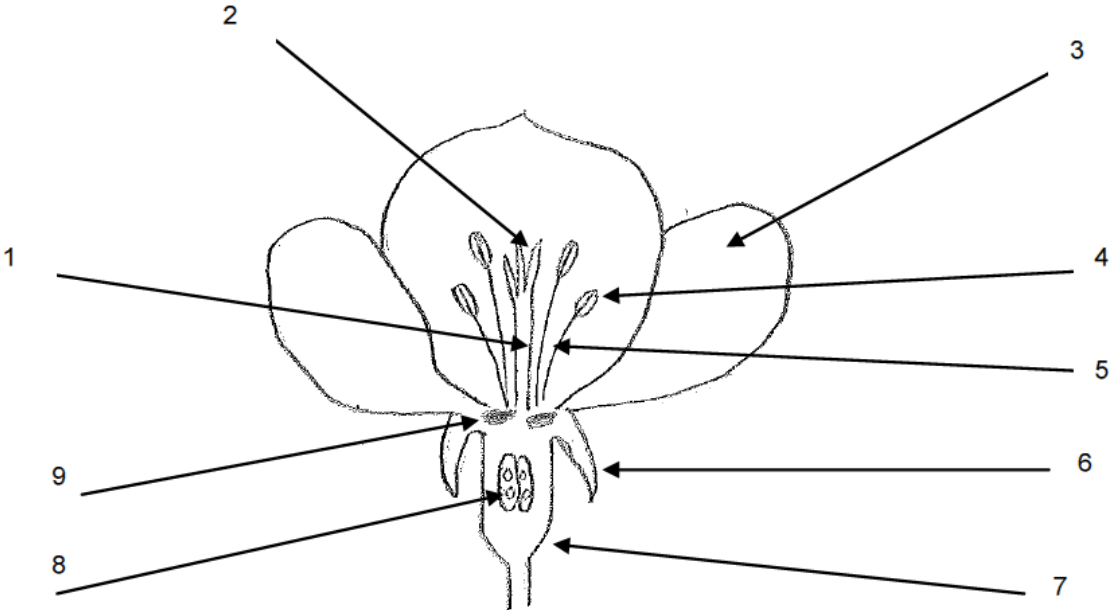
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|-----|-----|---|----|
| Q16 | (a) | Give the name and function of the 9 parts of the flower in the diagram provided. | 9 |
| | (b) | Give an account of the processes of pollination and fertilisation, distinguishing between the two. | 11 |
| | (c) | Define and discuss the advantages of self- and cross- pollination, and the mechanisms by which plants promote cross fertilisation. | 10 |
| Q17 | (a) | Describe, with reasons, how to prepare oil seed rape honey, following extraction, for storage in bulk containers. This honey will be used at a later date for processing and bottling soft set honey. | 7 |
| | (b) | Discuss the storage of this honey, referring to the principles of honey storage. | 8 |
| | (c) | Describe the preparation of clear honey from a 10 litre container of blackberry honey. This honey is intended for retail sale. | 15 |

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Q16 (a) Give the name and function of the 9 parts of the flower in the diagram below.

9



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

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