

THE BRITISH BEEKEEPERS' ASSOCIATION

Founded in 1874

Registered Charity No. 212025

EXAMINATION FOR PROFICIENCY IN APICULTURE

MODULE 2 HONEYBEE PRODUCTS AND FORAGE

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 Give a use for royal jelly.
- Q2 Name one plant with extra floral nectaries.
- Q3 Name one enzyme which is found in honey.
- Q4 Honey is hygroscopic. What does this mean?
- Q5 Name a constituent of honeydew honey that distinguishes it from floral honey.
- Q6 What is the optimum temperature to promote honey granulation?
- Q7 Name one permitted use for "Baker's Honey".
- Q8 Name one plant that produces honey which granulates rapidly.
- Q9 Give the specific gravity of honey at 20°C.
- Q10 Above what temperature does wax start to discolour?

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) | Define pollination and fertilisation. | 4 |
| | (b) | What is meant by cross-pollination? | 2 |
| | (c) | Why does nature favour cross pollination? | 2 |
| | (d) | Outline the methods used by plants to favour cross-pollination. | 7 |
| Q12 | (a) | How does honey granulate? | 4 |
| | (b) | Distinguish between naturally granulated, soft set and seeded types of honey. | 6 |
| | (c) | Describe briefly the preparation of seeded honey. | 5 |
| Q13 | (a) | What conditions must be present in order for honey to ferment? | 3 |
| | (b) | Name the end products of fermentation of honey. | 2 |
| | (c) | How can the storage conditions of honey help prevent fermentation? | 5 |
| | (d) | List the noticeable characteristics of fermented honey. | 5 |
| Q14 | (a) | List the legal requirements for labelling 454g jars of floral honey sold through a retail outlet in the UK. | 10 |
| | (b) | Name 5 of the legal requirements to which honey must conform. | 5 |
| Q15 | | Starting with clean beeswax, list the steps for the production of three beeswax candles for show. | 15 |

SECTION C (30 marks)

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

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|-----|-----|---|----|
| Q16 | (a) | Give a detailed account of how bees collect nectar, convert it into honey and store it. | 22 |
| | (b) | List the constituents in an average sample of UK floral honey. The typical percentage of each should be given. | 8 |
| Q17 | (a) | Explain the main differences between a tangential and a radial extractor and state the advantages and disadvantages of each. | 12 |
| | (b) | Other than by spinning describe one method of extracting ling honey. | 6 |
| | (c) | Describe the production of clear honey from granulated honey stored in 10 litre (28lb) buckets, in such a way as to ensure that the honey which is bottled will be clear and remain liquid for a period of 3 to 6 months. | 12 |