THE BRITISH BEEKEEPERS' ASSOCIATION

Founded in 1874 Registered Charity No. 212025

EXAMINATION FOR PROFICIENCY IN APICULTURE

MODULE 6 HONEYBEE BEHAVIOUR

8th November 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 for Section A on the question paper.

Q1 Name an effect in a normal colony resulting from the abrupt end of the nectar flow in early August. ……

Q2 Give a reason for the collection of propolis. ……..

Q3 What is trophallaxis? ……..

Q4 In which months will the colony population normally be at its minimum and maximum? ……..

Q5 When might drones be evicted from a hive other than at the end of the breeding season? ……..

Q6 Approximately how long after queen loss are queen cells likely to be started? ……

Q7 Give a reason why bees collect pollen. ……...

Q8 Give a behavioural characteristic adopted by a guard honeybee. ……..

Q9 Forage is only 25 metres away; how would a honeybee worker indicate this? ……

Q10 Name an enzyme added to nectar by worker bees as they process it. ……

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*

Q11 Describe briefly when and how a honeybee swarm builds comb at its new site. 15

Q12 List the steps in worker bees collecting pollen ready to carry it back to the nest. Do not include the return to the colony. 15

Q13 Briefly describe how a colony passes the winter successfully. 15

Q14
- (a) During a dearth of nectar, when observing a colony how would a beekeeper:
  - (i) recognise a guard bee? 3
  - (ii) recognise an approaching robber? 2
- (b) How would a guard bee recognise a colony nest mate? 3
- (c) During a moderate nectar flow how would a guard bee react to a fully laden worker drifting into the wrong hive? 2
- (d) What would the colony reaction be to an attack by wasps? 5

Q15 Describe briefly:
- (a) The circumstances and likely causes that can lead to a colony becoming hopelessly queenless. 3
- (b) The subsequent sequence of events in a colony of European strain of honeybees if the beekeeper does not intervene. 12

SECTION C (30 marks)

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

Q16 Describe the sequence of events in a colony once queen cells are started until the swarm sets off for its permanent new home. Write about the swarm, not about the bees that remain. 30

Q17 Describe the honeybee mating behaviour of honeybees and where this occurs. 30

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