

**B.Sc. 3rd Semester (Honours) Examination, 2022 (CBCS)**

**Subject : Zoology**

**Course : SEC-1**

**(Apiculture)**

**Time: 2 Hours**

**Full Marks: 40**

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

**Group-A**

1. Answer *any five* questions from the following: 2×5=10
- (a) What is monofloral honey? Mention its importance.
  - (b) State the significance of Varroa mites in apiculture.
  - (c) What is propolis? State its uses.
  - (d) How is bee pasturage related to honey production?
  - (e) What is 'colony collapse disorder'?
  - (f) Mention the role of nutrition in the caste development of female bees.
  - (g) Mention the chemical composition of honey.
  - (h) Who discovered the movable frame hive and when?

**Group-B**

2. Answer *any two* questions from the following: 5×2=10
- (a) Describe the communication methods among bees.
  - (b) What are the benefits of beekeeping? What is royal jelly? Mention the significance of blossom faithfulness. 3+1+1
  - (c) Mention two common pests and predators of honey bees. How do they cause harm to the bee hives? 2+3
  - (d) State the role of hormones in regulating the social organization of honey bees. What is swarming? 3+2

**Group-C**

10×2=20

3. Answer *any two* questions from the following:

(a) Write short notes on:

(i) Honey extraction

5+5

(ii) Steps of establishment of a beehive

(b) Differentiate between Newton and Langstroth beehives. Mention the names of commercially important honey bee species in India. What is a pollen trap?

6+3+1

(c) Describe one viral and one fungal disease of honey bees with their causative agents, symptoms and control measures.

(1+1)+(2+2)+(2+2)

(d) Write down the particular morphological features of worker honey bees and their uses for specific functions. Mention insect enemies of bees and their control measures in beekeeping.

6+4

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