

**2023/FYUG/ODD/SEM/  
ZOOSEC-101T/035**

**FYUG Odd Semester Exam., 2023  
( Held in 2024 )**

**ZOOLOGY  
( 1st Semester )**

**Course No. : ZOOSEC-101T**

**( Apiculture )**

Full Marks : 50  
Pass Marks : 20

**Time : 2 hours**

*The figures in the margin indicate full marks  
for the questions*

**SECTION—A**

**Answer *fifteen* questions, selecting any *three* from  
each Unit : 1×15=15**

**UNIT—I**

- 1. Define Apiculture.**
- 2. Honey bees belong to which phylum?**

( 2 )

3. Name the castes of honey bees.
4. Name the body parts of honey bee.

UNIT—II

5. Define bee hive.
6. What is 'Queen excluder'?
7. Why smoker is used in apiculture?
8. What are 'bee floras'?

UNIT—III

9. Name two bacterial diseases of honey bees.
10. Name the major wasp predators of honey bee colonies.
11. Name the endoparasitic mite infesting trachea of adult honey bee.
12. Name one fungal disease of honey bees.

UNIT—IV

13. What is pollen comb?
14. What is bee wax?

24J/473

( Continued )

( 3 )

15. What is the food of honey bee queens?
16. What are propolis?

UNIT—V

17. What is cross-pollination?
18. Define the term horticulture.
19. What do you understand by 'entomophily'?
20. What is Nasonov pheromone?

SECTION—B

Answer *five* questions, selecting *one* from each  
Unit : 2×5=10

UNIT—I

21. What is Royal jelly?
22. Why do the honeybees perform 'bee dance'?

UNIT—II

23. Write two advantages of rearing bees in modern bee hives.
24. Mention at least two criterions for selecting right type of bee for culture.

24J/473

( Turn Over )

( 4 )

UNIT—III

25. Name the Protozoan causing Amoeba disease in honey bees. Write two symptoms of the disease.
26. Mention the symptoms of Nosemosis.

UNIT—IV

27. Write the chemical composition of honey.
28. Mention few uses of pollen.

UNIT—V

29. Name two climatic factors that affect the honey bee activity.
30. Name two technologies that have revolutionized modern bee keeping practices.

SECTION—C

Answer *five* questions, selecting *one* from each  
Unit :  $5 \times 5 = 25$

UNIT—I

31. What is social organization? Describe in brief social organization in Honey bees.  $1+4=5$
32. Explain the communication in honey bees.

24J/473

( Continued )

( 5 )

UNIT—II

33. Describe the structural organization of modern bee hive with appropriate illustration.
34. Illustrate with diagram different types of bee-keeping equipments required in apiculture.

UNIT—III

35. Describe briefly about the nature of damage caused by Greater Wax moth. How would you manage the infestation of this pest?  $3+2=5$
36. Write short notes on any *two* of the following :  $2\frac{1}{2} \times 2 = 5$
- (a) American foul brood
- (b) Thai sac brood disease
- (c) Chalk brood disease

UNIT—IV

37. Discuss the physical properties of honey. Write few uses of honey.  $2+3=5$

24J/473

( Continued )

( 6 )

**38.** Write short notes on the following :  $2\frac{1}{2}\times 2=5$

(a) Chemical composition and uses of bee wax

(b) Medicinal value of honey bee products

UNIT—V

**39.** Discuss the importance of apiculture as a source of employment and livelihood.

**40.** Why bees are called efficient pollinators? Suggest various methods for bee management in horticultural gardens.  $1+4=5$

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