

Reg. No. :

**Code No. : 30309 E Sub. Code : JMZO 5 D/
SEZO 5 D**

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2021.

Fifth Semester

Zoology — Main

Major Elective II — APICULTURE

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. Which is the shortest leg of honeybee?
(a) Prothoracic leg (b) Mesothoracic leg
(c) Metathoracic leg (d) All
2. In honeybee, pollen brushes are found in
(a) Middle leg (b) Fore leg
(c) Hind leg (d) None
3. Which honeybee construct its comb in open air is?
(a) *Apis indica* (b) *A.dorsata*
(c) *Meliphona sp.* (d) *A.mellifera*

4. Number of caste system in honeybee is
 - (a) 3
 - (b) 4
 - (c) 6
 - (d) 1
5. Which of the following honeybee has wax gland?
 - (a) Queen
 - (b) Drone
 - (c) Worker
 - (d) Queen and worker
6. Secondary by products are the secretion of
 - (a) Wax glands
 - (b) Venom glands
 - (c) Salivary glands
 - (d) All
7. In honey bee Chalk brood disease caused by
 - (a) *Paenibacillus larvae*
 - (b) *Melissococcus pluton*
 - (c) *Ascosphaera apiscauses*
 - (d) *Aspergillus flavus*
8. In honeybee the Sac brood disease caused by
 - (a) Virus
 - (b) Fungus
 - (c) Bacteria
 - (d) Protozoan
9. The purpose of bee dance is
 - (a) Communication
 - (b) Mating
 - (c) Swarming
 - (d) Entertainment
10. Number of Supersedure queen cell in honey comb is
 - (a) Many
 - (b) Only one
 - (c) 5
 - (d) 1-3

PART B — ($5 \times 5 = 25$ marks)

Answer ALL the questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Write an account on Mouth parts of Honeybee.

Or

- (b) Briefly write the functions of workerbee.

12. (a) Explain the queen excluder.

Or

- (b) Briefly explain the location of apiary.

13. (a) Briefly explain about the Bee wax properties and composition.

Or

- (b) Write the physical properties of honey.

14. (a) Wasp the enemy of bee — brief.

Or

- (b) Briefly explain the Bacterial disease of European Foulbrood disease in honeybee.

15. (a) Write about bee wag dance.

Or

- (b) Write an account on robbing behavior of bee.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe the honeybee colony inspection.
Or
(b) Explain the bee dance.
17. (a) Explain the Newton's bee hive model with a neat diagram. Add a note on the advantage of using it.
Or
(b) With neat diagram, describe the structure of bee comb.
18. (a) Explain the solar wax extraction methods.
Or
(b) Describe the bee venom properties and its uses.
19. (a) Give an account on Viral disease of sac brood disease.
Or
(b) Describe the American Foulbrood disease in honeybee.
20. (a) Write the types of bee pasturage.
Or
(b) Write an essay on queen bee rearing.