



বিদ্যাসাগর বিশ্ববিদ্যালয়  
**VIDYASAGAR UNIVERSITY**  
**Question Paper**

**B.Sc. Honours Examinations 2021**

(Under CBCS Pattern)

**Semester - III**

**Subject : ZOOLOGY**

**Paper : SEC 1-T**

**Full Marks : 40**

**Time : 2 Hours**

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

*The figures in the margin indicate full marks.*

**(Apiculture)**

**(Theory)**

Answer any **three** questions from the following :

12×3=36

1. (a) Write down the names, symptoms, and control measures of disease caused by virus and protozoa in honey bee.
- (b) Write two scientific names of Indian honey bee species. 10+2
2. (a) Describe major bee keeping equipments.
- (b) What is bee wax ? Write the uses of bee wax.
- (c) Write a short note on : Wegtail dance. 4+(2+3)+3

3. (a) Write a short note on : Bee hive.  
(b) Write down the social behaviour of honey bee.  
(c) What is apitoxin ? 4+6+2
4. (a) Write the name, nature of damage and control methods of natural enemies of honey bee.  
(b) Describe the modern extraction methods of honey bee. 8+4
5. (a) Describe the Langstroth box for rearing of honey bee.  
(b) Write down the advantages of movable frame hive.  
(c) Write the chemical components of honey. 6+4+2
6. (a) What is honey ? Write the economic importance of honey.  
(b) Write a short note on : Bee pasturage.  
(c) What efforts are being made to preserve honey bee. (2+3)+3+4

**Group-B**

Answer any *two* questions from the following : 2×2=4

1. What is Royal jelly ?
2. Define Swarm.
3. Write the name of four commercial honey bee species.
4. What is Nuptial flight of honey bee ?

Or,  
Paper - SEC 1-T  
Aquarium fish keeping  
(Theory : Marks - 40)

Group-A

Answer any *three* questions from the following : 12×3=36

1. (a) Briefly describe about the aquarium.  
(b) What is ornamental fish ? Give two example.  
(c) Write the reproductive characters of Guppy fish. 4+3+5
  
2. (a) Which types of plants are used in aquarium ?  
(b) Describe the benefits and drawbacks of live fish food in the aquarium.  
(c) Write about the potential of aquarium Fish Industry as a cottage Industry? 3+4+5
  
3. (a) Write down the common characteristic of Gold fish.  
(b) What is the role of fish in an aquarium ?  
(c) Write down the transportation of fish in India.  
(d) What is sexual dimorphism ? 4+3+4+1
  
4. (a) Enlist 3 common endemic aquariums fish and 3 exotic aquarium fish with scientific names.  
(b) How does maintains the aquarium for fish culture. 6+6
  
5. (a) What is fish feed formulation ?  
(b) Write down the methods and techniques of feed formulation in an aquarium fish. 2+8

6. (a) Write the categorization of larvivorous fish.
- (b) Briefly discuss the roles of different ecological factors in determining the successful aquarium fish culture practice.
- (c) Briefly discuss the roles of different ecological factors in determining the successful aquarium fish culture practice.

**Group-B**

Answer any *two* questions from the following :

2×2=4

1. What is aquarium fish keeping ?
  2. Write down the types of aquarium.
  3. Write the systematic position of Guppy fish ?
  4. Write the effect of pH in aquarium fish farming ?
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