

Total number of printed pages-7

3 (Sem- 3/CBCS) ZOO SE1/SE2

2021

(Held in 2022)

**ZOOLOGY**

(Skill Enhancement Course)

Answer questions **either** from **SE-3014** or  
from **SE-3024**

Paper : ZOO-SE-3014

**(Ornamental Fish and Fisheries)**

Full Marks : 50

Time : Two hours

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

1. Choose the correct answers : **(any four)**  
1×4=4

- (a) *Xenentodon canicila* is an example of
- (i) classified Ornamental fish
  - (ii) carp
  - (iii) non-classified ornamental fish
  - (iv) barb



Contd.

(b) The chromatophores responsible for imparting yellow colour to fishes is

- (i) iridophores
- (ii) xanthophores
- (iii) erythrophores
- (iv) melanophores

(c) Trade name of ornamental fish *Chela laubuca* is

- (i) Indian glass barb
- (ii) mola carplet
- (iii) rosy barb
- (iv) silver hatchet

(d) Fin and tail rot disease in aquarium fishes is caused by

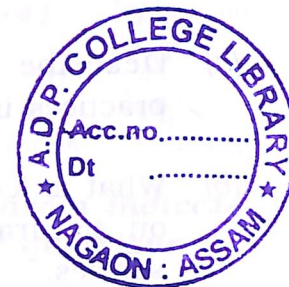
- (i) bacteria
- (ii) fungus
- (iii) protozoa
- (iv) helminth worm

(e) Commercially *Chara* sp is known as

- (i) tape grass
- (ii) stonewort
- (iii) milfoil
- (iv) fanwort

(f) *Colisa fasciata* is an ornamental fish of the fish group

- (i) carp
- (ii) barb
- (iii) glass fish
- (iv) gourami



2. Answer the following questions : **(any three)**

2×3=6

(a) Define classified ornamental fish. Give one example. 1+1=2

(b) What is sexual dimorphism ? 2

(c) What are carotenoids ? Name one natural source of carotenoid. 1+1=2

(d) What are planktons ? Mention one significance of planktons in an aquarium. 1+1=2

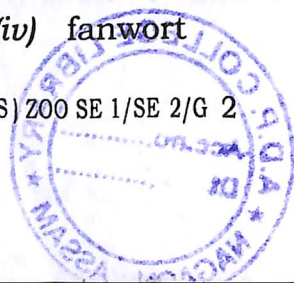
3. Write short notes on : **(any two)** 5×2=10

(a) Biological filters

(b) Ornamental fish diversity of North-Eastern India

(c) Feed formulation

(d) Lighting devices in an aquarium



4. Answer the following questions : **(any three)**

10×3=30

(a) Describe briefly the management practices in an aquarium. 10

(b) What is fecundity ? Write a brief note on natural breeding of *Trichogaster* species. 2+8=10

(c) Give an account on non-infectious disease found among ornamental fishes. Mention *three* preventive measures for spread of diseases in an aquarium. 7+3=10

(d) Describe in brief the natural food of ornamental fish. 10

(e) What is wetland ? Give an account of ornamental plant diversity found in wetlands. Mention *two* significances of plants in an aquarium. 1+7+2=10

(f) What are chromatophores ? Describe the strategies for maintenance of natural colour of ornamental fish. 2+8=10

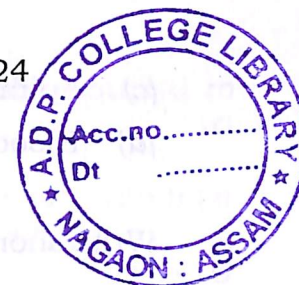
\_\_\_\_\_

Paper : ZOO-SE-3024

**( Apiculture )**

Full Marks : 50

Time : Two hours



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

1. Fill in the blanks : **(any four)** 1×4=4

(a) The class of honey bee is \_\_\_\_\_.

(b) The most prevalent contagious disease among bee is \_\_\_\_\_.

(c) \_\_\_\_\_ season is suitable for bee population.

(d) Generally the queen takes \_\_\_\_\_ days to complete the life cycle.

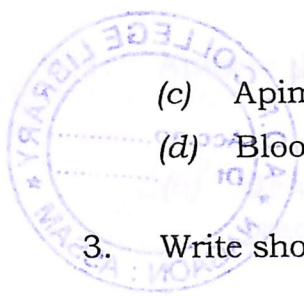
(e) The main constituents of honey is \_\_\_\_\_.

(f) The basal part of modern hive is known as \_\_\_\_\_.

2. Write briefly on the following : **(any three)** 2×3=6

(a) Functions of worker bee

(b) Langstroth frame of hive

- 
- (c) Apimondia  
(d) Blood of bee

3. Write short notes on the following : **(any two)**  
5×2=10

- (a) Beehive  
(b) Bee dance  
(c) Apiculture as cottage industry  
(d) Newton model of hive

4. Answer the following questions : **(any three)**  
10×3=30

- (a) Elaborate social organization in honey bee. 10  
(b) What are different castes of honey bee? Write about the life history of honey bee with suitable diagram. 2+8=10  
(c) What are different diseases of honey bee? Mention the preventive measures of these diseases in a beehive. 4+6=10  
(d) Why is artificial bee rearing required? Illustrate your answer with different models of hive. 2+8=10

- (e) Write about different tools required to start a beehive. 10  
(f) Describe the indigenous and modern methods of extraction of honey. 5+5=10
- 

