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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 cancila* 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