2022

ZOOLOGY — HONOURS

Paper : SEC-B-1

(Aquarium Fish Keeping)

Full Marks : 80

The figures in the margin indicate full marks.

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

Answer *any eight* questions.

1. (a) Distinguish between egg layers and live bearers.

   (b) Write the scientific name of Gold fish. Enumerate its morphological characters and social behaviour.

   (c) How will you distinguish between male and female Guppy fish? 2+(1+2½+2½)+2

2. (a) Why is fish meal an important component of artificial feed?

   (b) Mention three advantages of using *Artemia* as feed.

   (c) Why are additives added to fish feed? Name one such additive. 4+3+(2+1)

3. (a) Mention the employment avenues related to the ornamental fish industry.

   (b) How does this industry help in rural development and women empowerment?

   (c) Write the scientific name of Angel fish. 4+(2½+2½)+1

4. Write short notes on *any two* of the following :

   (a) Chemical methods for water and fish treatment during transport

   (b) Potential exotic larvivorous fishes

   (c) Phytoplanktons used for live fish feed in aquarium. 5×2

5. Write an account on morphological characteristics mentioning sexual dimorphism and breeding strategies of — 5×2

   (a) Blue morph fish

   (b) Angel fish.

6. (a) Mention the scientific names of any three endemic species of aquarium fishes.

   (b) How can you select a breeding pair before successful production of ornamental fish?

   (c) What are the criteria for selection of ornamental fish? 3+3+4

Please Turn Over

7. Write short notes on *any two* of the following :

   (a) Fishing nets

   (b) Anemone fish

   (c) Pelletization.

8. (a) What qualities should be considered for a transparent polythene bag as a packing device for aquarium fishes?

   (b) Comment on the influences of (i) Stocking Density (ii) Temperature (iii) Dissolved gases in the packaging procedure of aquarium fishes.

   (c) Write a note on problems of ornamental fish culture in India.

                    $3+(1\frac{1}{2}+1\frac{1}{2}+1\frac{1}{2})+2\frac{1}{2}$

9. (a) Mention the importance of Brine shrimp and Tubifex as aquarium fish food.

   (b) What do you mean by fore-ground and back-ground aquarium plant?

   (c) Write down the feeding behaviour of Guppy.

                    $(2+2)+(2+2)+2$

10. (a) What is 'infosuria'? Mention its major organismic content and raising process.

   (b) Distinguish between suspension and Pelletized formulated fish food.

   (c) Enlist the nutrient composition and mention their respective content in an ideal formulated fish food.

                    $(1+2+3)+1+3$

11. (a) Why salinity and ammonia content are being considered as two of the major stress factors during transportation of aquarium fishes? How will you remediate these two stress factors during transportation of the said fishes?

   (b) Name two sedatives used during transportation of aquarium fishes. $[(2+2)+(2+2)]+2$

12. (a) Enlist the steps involved in the monthly maintenance procedure of an aquarium.

   (b) What is carbonate hardness (KH)? Mention its role in the maintenance procedure of an aquarium.

   (c) Mention the importance of filter to keep an aquarium healthy. $4+(2+2)+2$

13. (a) Give an account of aerators and biological filters in home aquarium.

   (b) Discuss briefly the influence of fertilizers on the growth of aquarium plants.

   (c) State the advantages of live feed. $4+4+2$

                        $2×5$

14. Answer *any five* of the following questions :

   (a) What is the scientific name of Butterfly fish?

   (b) Comment on sexual dimorphism of Sword tail fish.

   (c) Write about the role played by copper sulphate and potassium per-manganate in aquarium maintenance.

(d) Comment on territorial behaviour of aquarium fish.

(e) Name two marine based exotic fishes.

(f) What do you mean by Aquascaping?

(g) Name two rotifers used as live fish food for aquarium fishes.

(h) Write the importance of Shrimp meal.

———————