

M.Sc. ZOOLOGY
THIRD SEMESTER (SPECIAL REPEAT)
FISH AND FISHERY BIOLOGY-I
MSZ-303 C
[USE OMR SHEET FOR OBJECTIVE PART]

SET
A

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

Marks: 20

(Objective)

Choose the correct answer from the following:

1 × 20 = 20

1. Colouration in fishes is due to the presence of two types of special cells. They are:
 - a. Methionine and lysine
 - b. Proline and Methionine
 - c. Irridiocytes and Chromatophores
 - d. None of the above
2. The hill stream fishes generally possess a:
 - a. Long, narrow and band shaped caudal peduncle
 - b. Arrow shaped caudal peduncle
 - c. Bow shaped peduncle
 - d. All of the above
3. Which among these indices ascertains the condition of a fish sample?
 - a. Ponderal index
 - b. Index of fullness
 - c. Length weight relationship
 - d. Index of preponderance
4. Fish provide vitamin /vitamins:
 - a. A, B and D
 - b. Vitamin A 1
 - c. B only
 - d. None of the above
5. When a dam is constructed:
 - a. It helps in the movement of fish
 - b. It acts as a barrier in the movement of fish
 - c. None of the above
 - d. Both of these
6. *Harpodon neherus* attains a length of:
 - a. 33 cm
 - b. 90 cm
 - c. 100 mm
 - d. 55 cm
7. Some species of fish is demonstrated to grow faster on diets with a long chain of:
 - a. Polyunsaturated fatty acids
 - b. Unsaturated fats
 - c. Polysaturated fatty acids
 - d. Non-saturated lipids
8. The percentage of body weight of fish that is used for production of eggs is determined by the:
 - a. Hepatosomatic index
 - b. Gonadosomatic index
 - c. Fullness index
 - d. Feeding index
9. Depending on the fat content the fish may be classified as oily or fat if the fat content is more than:
 - a. 8%
 - b. Less than 8%
 - c. Both a and b
 - d. None of the above

10. The formation of yellow water is due to the growth:
 - a. Of Chrysophyta
 - b. Euglena
 - c. Green Algae
 - d. All of the above
11. Which among these is not a stimulus to which physiological chromatophore alteration of pigment granules causing dispersion or aggregation could take place?
 - a. Light
 - b. Pressure
 - c. Chasing
 - d. Temperature
12. Which among these is not a part of accessory respiratory organs?
 - a. Supra branchial chamber
 - b. Respiratory chamber
 - c. Fan chamber
 - d. Inferio-branchial chamber
13. How marine cyclostomes survive in high saline conditions?
 - a. Taking excess salts from host
 - b. Taking excess water from host
 - c. Taking excess blood from host
 - d. Releasing urea once all together
14. With extreme position of kidney being fused together, the particular fish would be a:
 - a. Marine fish
 - b. Freshwater fish
 - c. Estuarine fish
 - d. Brackish fish
15. A high relative gut length infers that the fish is a:
 - a. Herbivorous
 - b. Carnivorous
 - c. Omnivorous
 - d. Detritivorous
16. The Relative Gut Length (RGL) in carps is:
 - a. 9.5
 - b. 11.5
 - c. 13.5
 - d. 15.5
17. A true stomach is found in:
 - a. Herbivorous fish
 - b. Predatory fish
 - c. Planktivorous fish
 - d. Detritivorous fish
18. Most effective method of extension:
 - a. Mass awareness programme
 - b. Formal education
 - c. Informal
 - d. Ranching programme
19. Fish locks are mechanical gates with arrangements for the regulation of flow of water:
 - a. Into and out of the lock
 - b. Up the lock
 - c. Down the lock
 - d. Cannot be determined
20. Which among these is an exclusively plankton feeder?
 - a. *Rita rita*
 - b. *Chanda nama*
 - c. *Gadusia chapra*
 - d. *Colisa fasciatus*

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(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. What are different foods of fishes? Explain various feeding habits with three examples in each category. 5+5=10
2. What are accessory respiratory organs? Explain in brief about each of the type with major focus on *Anabas testudineus* with diagram. 4+6=10
3. Explain the structure of kidney in fishes. Also write about the different types of kidneys with diagrammatic representation. Write about the various parts of nephron found in a marine fish. 3+5+2=10
4. Elucidate in detail the Biochemical composition of Fish. 10
5. Elucidate in detail the role of plankton in fisheries citing suitable examples. 10
6. Highlight briefly about the pristine conditions present in the hill streams. Elucidate the modifications and adaptive features of the Hill Stream Fishes citing suitable examples. 3+7=10
7. Discuss the effects of dams on fish migration suggesting suitable remedies. 10
8. Discuss briefly about the Inland Capture fisheries of India. 10

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