

The Assam Royal Global University, Guwahati

Royal School of Life Sciences

M.Sc Zoology , 1st Semester

Semester End Examination , December 2018

Course Title : FISH BIOLOGY

Course Code: ZOO144D101

Time: 3 hours

Maximum Marks: 70

Note : Attempt all questions as per instructions given
The figure in the right hand margin indicate marks.

SECTION - A

1. Answer the following : (all compulsory)

2x8

- What is beel ? Name some fishes commonly found in beel.
- What is isinglass ? Explain in few sentences.
- What do you mean by meristic count and measurement ? Explain with diagrams.
- What are the characteristics of cat fishes ? name four cat fishes.
- Define algal bloom. What factors causes algal bloom ?
- What is bottom up approach in a trophic cascade. Explain with an example.
- How do marine fishes adapt themselves to the salty environment ?
- Classify and define fishes according to their food habits .

SECTION - B

2. Answer the following : (any three)

4x3

- What do you mean by relative and absolute growth ? Differentiate between relative and absolute growth with examples.
- What are the different methods for establishing fish population ?
- Give an account on fisheries and its categories.
- What are the morphological features of fish ? Discuss with suitable diagrams.

3. Answer the following : (any two)

6x2

- What are the different factors that influence the properties of freshwater ecosystem ?
- What is trophic cascade system ? What are its different types ? Explain the types of trophic cascade taking pond ecosystem as an example.
- Define primary productivity ? Write a detailed note on the various methods of measuring primary productivity.

4. Answer the following (any two)

6x2

- a) Write an account of fish migration.
- b) List down and describe the various fish diseases that are caused by helminthic and protozoan pathogens. Write briefly about the treatment procedures in each case.
- c) i) What is gastrostomatic index ?
ii) For a 8 kg Chital fish , calculate the gastrostomatic index if the per day diet of the fish includes the following :
Shrimp : 15 gms , Zooplankton : 5 gms , Minnows : 120 gms , Plant debris : 10 gms

5. Answer the following : (any two)

5x2

- a) How is induced breeding done in fishes ?
- b) Write a note on fish by-products.
- c) Discuss fishery cum duckery.

Section – C

6. Answer the following :

8

Give a brief account on composite fish farming.