

OLD

2015

Part-I 3-Tier

AQUACULTURE MANAGEMENT

PAPER—I

(Honours)

Full Marks : 100

Time : 4 Hours

The figures in the margin indicate full marks.

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

Illustrate the answers wherever necessary.

1. Answer any *ten* questions from the following : 2×10
- (a) What do you mean by gastric and agastric fish?
 - (b) Define venous heart.
 - (c) Distinguish between the gill-rakers of herbivorous and carnivorous fishes.
 - (d) Define osmoregulation.

(Turn Over)

- (e) Define nursery pond.
- (f) What is Gonado-Somatic Index ?
- (g) Define fishing gears.
- (h) What is neuromastorgan ? Mention its function.
- (i) State absolute and relative growth.
- (j) Define α and β taxonomy.
- (k) What is significance of tagging of fishes ?
- (l) What do you mean by feed conversion ratio ?
- (m) Write the scientific name of invasive fish species.
- (n) Define Plankton. Give one example.
- (o) Define positive and negative estuaries.

Group—A

2. Answer any *two* questions from the following : 10×2
- (a) Classify class crustacea upto order with characters and example. 6+2+2
 - (b) Give a detail account to Tunna fishery in India and mention its present status. 8+2
 - (c) Define maturity and fecundity. Give an account of maturity stages of fishes according to International scale. 2+8

(d) Mention distinctive characters with example of the following order of fish —

(a) Cypriniformes ;

(b) Siluriformes ;

(c) Anguiliformes ;

(d) Perciformes.

$2\frac{1}{2} \times 4$

3. Answer any *one* question of the following : 15×1

(a) (i) Discuss on the modification of mouth of fishes due to their feeding habit.

(ii) How you will determine the growth of fish through the study of scale.

(iii) How would you calculate the length-weight relationship of fish ? $5+5+5$

(b) (i) Describe the male reproductive system of any Teleost fish with proper diagram.

(ii) How would you calculate the fecundity of a fish ?

(iii) Enlist the different factors affecting the fecundity of fish. $6+5+4$

Group—B

4. Answer any *two* questions from the following : 10×2
- (a) Define culture and capture fishery. State potentiality and problems of inland capture fishery resources of India. 2+4+4
- (b) (i) Enlist the major marine fish species with commercial importance.
- (ii) Add a note on the conservation of marine fishery resources of India. 5+5
- (c) Define inshore and offshore fishery. Discuss in details the marine zonation. Add a note on PFZ. 3+5+2
5. Answer any *one* question from the following : 15×1
- (a) Write notes on :
- (i) EEZ and CRZ
- (ii) Remote sensing and its application in fisheries. $7\frac{1}{2}+7\frac{1}{2}$
- (b) Write short notes on :
- (i) Fishing gears used in West Bengal.
- (ii) Thermal stratification of lake. $7\frac{1}{2}+7\frac{1}{2}$
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