UG/I/AQM/H/II/17

2017

AQUACULTURE MANAGEMENT

[Honours]

PAPER – II

Full Marks : 90

Time : 4 hours

The figures in the right hand margin indicate 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*) Write the criteria for selecting the candidate species for aquaculture.

   (*b*) Name four indigenous cold water fish species.

   (*c*) Write the name of two edible oysters from Indian water.

(*d*) Write a short note on EEZ of India.

(*e*) Mention the recommended species combination in composite fish culture system.

(*f*) Name two chemicals used to control aquatic weeds in fresh water pond.

(*g*) Write a short note on parental care in fish.

(*h*) What is inbreeding depression ?

(*i*) State the importance of supplementary feeding in aquaculture.

(*j*) Write the cell types of proximal pars distalis of hypophysis.

(*k*) What is the function of cryoprotectant used in cryopreservation ?

(*l*) Write short note on cleavage.

(*m*) What do you mean by crossing over ?

(*n*) What do you mean by detritus food chain ?

(*o*) Write a short note on natural gynogenesis.

GROUP – A

2. Answer any *two* questions from the following : 10×2

(*a*) (*i*) What is composite fish culture ?

(*ii*) Briefly describe the methods of composite fish culture.

(*iii*) Add a note on Management practices adopted in fresh water aquaculture. $2 + 5 + 3$

(*b*) (*i*) Write a note on Cage culture of fish.

(*ii*) Briefly discuss the present status and prospect of cold water fisheries in India. $5 + 5$

(*c*) Write short notes on the following : $2\frac{1}{2} \times 4$

(*i*) Food web

(*ii*) Super intensive aquaculture

(*iii*) Bhery Fishery

(*iv*) Common diseases of aquarium fishes.

(*d*) (*i*) Briefly discuss the biology of mud Crab.

(*ii*) Write a note on Pokkali fisheries

(*iii*) Discuss the suitable management practices to enhance marine fisheries production. 4 + 3 + 3

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

(*a*) (*i*) Briefly describe the integrated fish farming.

(*ii*) Discuss the conservation and management strategies for inland capture fishery.

(*iii*) Write a short notes on Biofertilizer. 6 + 5 + 4

(*b*) Write short notes on the following : 3 × 5

(*i*) Duck-Cum Fish Culture

(*ii*) Biological filters

(*iii*) Methods of production of live fish feed

(*iv*) Aquascaping

(*v*) Control of algal blooms.

GROUP – B

4. Answer any *two* questions from the following : 10×2

(*a*) (*i*) What is linkage ?

(*ii*) Write a note on gene mutation.

(*iii*) Briefly write on chromosomal aberrations. $2 + 4 + 4$

(*b*) (*i*) Name the hormones secreted from adenohypophysis of fish.

(*ii*) Write a note on pheromones in fish.

(*iii*) Briefly write on ontogenic development in fish. $2 + 4 + 4$

(*c*) (*i*) What is gynogenesis ?

(*ii*) Briefly describe the induced gynogenesis in carps with suitable diagrams. $2 + 8$

(*d*) Write short notes on the following : $2\frac{1}{2} \times 4$

(*i*) Polyploidy in fish

(*ii*) Modes of reproduction in fish

(*iii*) Seed collection form natural resources

(*iv*) Endocrine glands in fish.

5. Answer any *one* question from the following : 15×1

(*a*) (*i*) Write a note on transgenic fish.

(*ii*) Discuss the ecological influence on maturation of gonads and spawning of fish.

(*iii*) Briefly write the advantages of culture of sterile fish. $5 + 7 + 3$

(*b*) Write notes on the following : $5 + 5 + 5$

(*i*) Structure of chromosome

(*ii*) Hybridization in fish

(*iii*) Multiple carp spawning.
