

B.Sc. III
INDUSTRIAL FISH AND FISHERIES

The syllabus is based on 6 theory periods and practical's of 6 periods per week. The examination shall comprised of two theory papers of 50 marks each of three hours duration, practical of 6 hours duration, carrying 30 marks and 20 marks for internal, 10 marks for each paper.

SEMESTER -VI

Paper – I
(Cultural and breeding of Aquarium Fishes.)

Unit - I

	Periods
• Methods of cleaning of aquarium	02
• Maintenance of water quality	03
• Control of algal growth	03
• Common diseases of Aquarium Fishes, Their diagnosis and treatment.	04

Unit - II

• Fresh water & marine ornamental fishes their taxonomy & biology	03
• Marine ornamental fishes their habitat & collection from nature	04
• Methods of collection	03
• Transport of live fish.	02

Unit – III

• Study of ornamental organism , anemones lobsters, shrimps, octopus, starfish	04
• Live bearers aquarium fishes.	03
• Egg layers aquarium fishes.	03
• Breeding habits of oviparous & Viviparous aquarium fishes	02

Unit - IV

• Secondary sexual characters in aquarium fishes	03
• Spawning, parental care.	03
• Fertilization and development of eggs.	02
• Larval rearing and their health, food and feeding of young one.	04

B.Sc. III
INDUSTRIAL FISH AND FISHERIES

The syllabus is based on 6 theory periods and practical's of 6 periods per week. The examination shall comprised of two theory papers of 50 marks each of three hours duration, practical of 6 hours duration, carrying 30 marks and 20 marks for internal, 10 marks for each paper.

SEMESTER -VI

Paper – II
(Fishery economics and extension education)

Unit - I

	Periods
• Principles of economics of fisheries	03
• Special characteristic features of fishery resources is common property resource	03
• Theory of fishery production	02
• Law of diminishing returns and risk and profits in fisheries	04

Unit - II

• Traditional and commercial fishes operation in marine fisheries And aquaculture.	04
• Characteristics of goods, private & public valuation.	03
• Law of supply & demand of fish.	02
• Elasticity of fish supply & demand.	02

Unit – III

• Economics of fish market & marketing resources.	02
• Co- Operatives and their importance in fish production and marketing.	03
• Export oriented growth policies, fishery projects.	03
• Planning and financing schemes for fisheries	04

Unit - IV

• Principles of extension education	02
• Role of extension in community development	02
• Rural development strategies programmes for weaker section of Community.	04
• Tools in rural development, extension, strategies and methodologies	03

Practical of Semester – VI

Time: 6 Hrs.

Total Marks: 30

(Practical will be 6 hrs. duration.)

- Study of morphological characters of common fresh water and marine water aquarium fishes.
- Study of ornamental organisms
- Maintenances of Brood fishes .
- Breeding of egg layer & live bearer fishes.
- Packing and transportation of live fish.
- Collection and identification and multiplication of common aquarium plant.
- Study of economics of fishing vessels, estuarine and riverine culture fisheries.
- Visit to fish processing unit in fish farm, to study economic aspects.
- Visit to villages to popularizes fisheries activities and to study field programme.
- Discussion with fish farmers, participation in fishing and fish processing activities .
- Activities of Government and private agencies.

Distribution of marks

Time: 6hrs.

Total Marks: 30

- Que. 1. Identification of given spot (1-8) ----- (08)
- Que. 2. Live fish food for aquarium fishes ----- (03)
- Que. 3. Breeding of aquarium fishes----- (03)
- Que. 4. Project ----- (08)
- Que. 5. Class record ----- (03)
- Que. 6. Viva – Voce ----- (02)
- Que. 7. Submission of aquarium and collection ----- (03)

B.Sc.III (Semester -VI)

Books Recommended:

- **Cold water aquarium and simple out door pools : 1970 – Wainwright No., Frederic wisne.**
- **Guppy it's life cycle: 1974, White W-sterlings publication.**
- **Encyclopedia of aquarium fishes: 1977, Coffey, D.T. Arcro Publication Company.**
- **Fresh water Aquarium : 1984 – Dewes J. A. Robert LTD.**
- **Gold fish: 1981 – Hervey - G. F. and J. Hems Faber and Faber.**
- **Fisheries economics an introduction: Canningham Dunn & whitmarsh .**
- **Marketing management : 1988, – Kother P.**
- **Extension education : Adivi Reddy**
- **Cultural research and extension programme : J.K. Boyee & L.E. Eranson**

INDUSTRIAL FISH AND FISHERIES
Question Paper pattern B.Sc. (Sem. VI)

Note :- All questions are compulsory
All questions carry equal marks
Draw diagrams wherever necessary.

Time : 03 Hrs.

Max.marks :50

Unit 1

Que 1. Long answer question ----- 10

OR

a) Long answer ----- 05

b) Long answer ----- 05

Unit 2

Que 2. Long answer question ----- 10

OR

a) Long answer ----- 05

b) Long answer ----- 05

Unit 3

Que 3. Long answer question ----- 10

OR

a) Long answer ----- 05

b) Long answer ----- 05

Unit 4

Que 4. Long answer question ----- 10

OR

a) Long answer ----- 05

b) Long answer ----- 05

Unit 5

Que 5. Write a short notes on following (any five)..... 10

Unit 1 A

B

Unit 2 C

D

Unit 3 E

F

Unit 4 G

H.