



**DR .B.R. AMBEDKAR UNIVERSITY-
SRIKAKULAM**



SYLLUBUS-2021-2022



Certificate Course

On

Aquaculture(Fresh water fisheries)

Department of Zoology

Govt.Degree college-Baruva

Srikakulam-A.P



Fish morphology explain to the students at the field



Explaining about the fish gears and nets at the field



Offline class of the course



Fish pond observation at the field

Minutes of Board of Studies

Certificate course on Aquaculture (fresh water fisheries) analysis and management

Agenda

1. To approve the Marks and Credit for the course
2. Approve the marks and credits for the course
3. To approve the number of Teaching hours

RESOLUTION:

It was designed by the Department of zoology with help of other zoology lecturers.

- There shall be Three days class work per week
- If any candidates holding a job industrial training is be done during vacation period.
- Marks and Credits are allocated to Theory and practical papers .
- Conduct the Field trip and Project work.

BOARD OF STUDIES (SYLLUBUS FRAME WORK)

s.no	Name of the Members	Signature
1	Chairman Dr Saleem basha Principal of Govt.Degree college Baruva	
2	Sri K.Hemasundara rao Lecturer in zoology GDC-Baruva	
3	Sri G.L.N.Prasad Lecturer in zoology (Associate Member) GDC-Kalyan Durgam	
4.	Dr R.Ramachendra Lecturer in zoology(Associate Member) GDC-Rajam	

GOVERNMENT DEGREE COLLEGE-BARUVA

SYLLUBUS(2021-2022)

CONTENTS

1. Preamble
2. Objectives
3. Course outcomes
4. BOS Committee
5. Course structure
6. Syllabus
7. Reference
8. Model Papers

Aquaculture(Fresh water fisheries)

UNIT-I	10
1.1.Definition and Principles of aquaculture	
1.2.History of Fresh water fisheries	
1.3.Fresh water fisheries in Andhrapradesh	
1.4.Types of fresh water fisheries	
UNIT-II	05
2.1.Selection of the site , soil test	
2.2.Construction of bandh (fish pond)	
2.3.Types of ponds	
UNIT-III	05
3.1.Pond management	
3.2.Fish seed management	
3.3.Fish preservation methods	
3.4.Fish marketing	10
UNIT-IV	
4.1.Selection of fish seed	
4.2.fish feed management	
4.3.Types of diseases-Bacterial, Fungal &Viral diseases	
UNIT-V	10
5.1.Pran culture and management	
5.2.Prawn pond management	
5.3.Feed management and nutrients	

PRACTICALS

1.1.Types of ponds

1.2.Types of fresh water fishes

1.3.Fish preservation methods

References

- Mathew Landau. 1995. Introduction to Aquaculture. Daya Publishing House, New Delhi.
- Pillay, T. V. R. 1993. Aquaculture: Principles and Practices. Fishing News Books. Black Well Scientific Publications.
- MPEDA, 1991. Hand Book on Shrimp Farming, Kochi, India.
- Jhingran, V. G. 1982. Fish and Fisheries of India. Hindustan Publishing Corporation, New Delhi.
- Chakrabarti, N. M. 1998. Biology, Culture and Production of Indian Major Carps. Narendra Publishing House, New Delhi.
- Coche, A. G. and J. F. Muir. 1996. Pond Construction and Fresh Water Fish Culture — Pond Farm Structures and Layouts — Simple Methods for Aquaculture. FAO. Daya Publishing House, New Delhi.
- Upadhyay, A. S. 1995. A Hand Book on Design, Construction and Equipments in Coastal Aquaculture (Shrimp Farming). Daya Publishing House, New Delhi.
- Wheaton, F. W. 1985. Aquaculture Engineering. MPEDA, Cochin.
- Y MPEDA 1990. Aquaculture Engineering and Water Quality Management. Cochin, India.

You Tube Video

- 1 De Silva SS & Anderson TA. 1995. *Fish Nutrition in Aquaculture*. Chapman & Hall Aquaculture Series.
- 2 Guillame J, Kaushik S, Bergot P & Metallier R. 2001. *Nutrition and Feed.-“rig of Fish and Crustaceans*. Springer Praxis Publ.
- 3 Halver J & Hardy RW. 2002. *Fish Nutrition*. Academic Press.
- 4 Halver JE & Tiews KT. 1979. *Finfish Nutrition and Fish feed Technology*. Vols. I, II Heenemann, Berlin.
- 5 Hertrampf JW & Pascual FP. 2000. *Handbook on Ingredients for Aqiiicilture Feeds*.

Kluwer.

6 Houlihan D, Boujard T & Jobling M. 2001. *Food Intake in Fish*. Blackwell

7Lavens P & Sorgeloos P. 1996. *Manual on the Production and Use of Live Food for Aquaculture*. FAO Fisheries Tech. Paper 361, FAO

GOVERNMENT DEGREE COLLEGE-BARUVA

DEPARTMET OF ZOOLOGY

Fresh water aquaculture Model paper

Time:3hr

Marks:75

SECTION-A

I. Answer the following all questions

5*10=50

1. Write about history and principles of aquaculture

(or)

Write the present performance of fresh water aquaculture in india

2. Write the structure and selection of site of fish pond

(or)

Write about construction of fish pond

3. Briefly write the fish preservation methods

(or)

Explain about the fish seed management system

4. Write the different types of diseases in fresh water aquaculture

(or)

Briefly write about the fish feed management system

5. Explain the prawn culture process

(or)

Briefly explain the prawn feed management

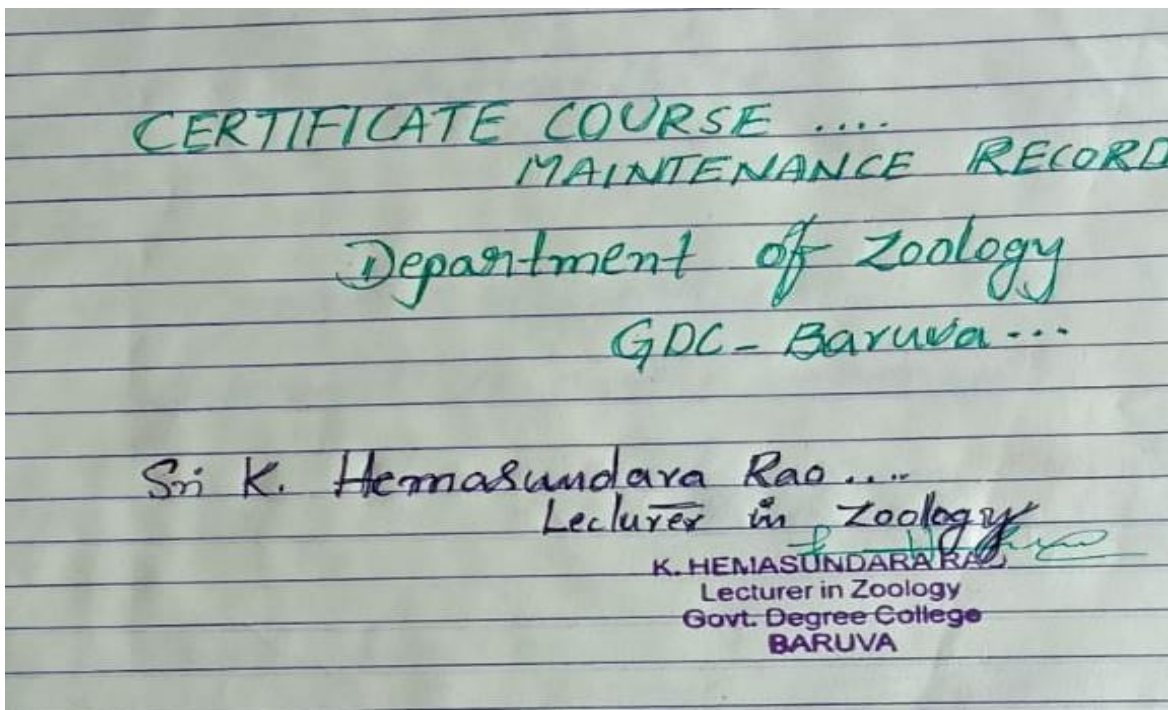
SECTION-B

II. Answer the any 5 following questions.

5*5=25

6. Natural fish preservation
7. HUPA
8. Biological pollution control
9. Types of fresh water fisheries
10. Fish feed
11. Shell fisheries
12. Fish marketing
13. Nursery pond

Aquaculture (Fresh water fisheries)



Certificate course - I

* course offered *

Name: Fresh water fisheries
in
Aquaculture

Course Eligibility ...

Intermediate pass / Degree fail /
Degree studying students

K. Hemasundara Rao

Lect in Zoology

Lecturer in Charge
Dept of zoology
Govt. Degree College
BARUVA, Srikakulam Dt

ADMISSIONS

S.NO	H.NO AD.NO	Name of the student	Caste	AD. Fee
1	2022001	B. GIRIJA	BC-D	50/-
2	002	B. DEVI	SC	50/-
3	003	B. NEELIMA	SC	50/-
4	004	CH. CHANDINI	BC-A	50/-
5	005	D. MAMATHA	BC-A	50/-
6	006	D. SWATHI	BC-A	50/-
7	007	T. UMA	ST	50/-
8	008	J. TOYAJAKSHI	BC-B	50/-
9	009	M. YAMUNA	BC-A	50/-
10	010	NIRMALA PRADHAN	BC-D	50
11	011	N. pooja	BC-D	50
12	012	R. Meena	BC-B	50
13	013	S. LAVANYA	SC	50
14	014	M. SUNEETHA	SC	50
15	015	T. KAVYA	ST	50/-
16	016	V. DHANALAXMI	BC-D	50
17	017	N. NEERAJA	BC-A	50
18	018	J. LAKSHMI	BC-A	50
19	019	N. SURYA	SC	50
20	020	M. KRISHANA	SC	50
21	021	N. SIVA PRASAD	BC-A	50
22	022	SRIKANTH PRADHAN	BC-A	50
23	023	SRIVACHA PRADHAN	BC-D	50

✱ ASSIGNMENT MARKS ✱

S.NO	STUDENT NAMES	ASSIGN-T/25	ASSIGN-II/25
1	B. GIRIJA	22	21
2	B. DEVI	20	21
3	B. NEELIMA	19	18
4	CH. CHANDINI	17	18
5	D. MAMATHA	18	17
6	D. SWATHI	24	23
7	T. UMA	19	20
8	J. TOYATAKSHI	16	17
9	M. YAMUNA	17	18
10	NIRMALA PRADHAN	23	24
11	N. POOJA	22	23
12	R. MEENA	19	18
13	S. LAVANYA	17	18
14	M. SUNEETHA	16	19
15	T. KAVYA	18	17
16	V. DHANALAXMI	20	21
17	N. NEERAJA	19	20
18	T. LAKSHMI	19	20
19	N. SURYA	20	19
20	M. KRISHANA	20	21
21	N. SIVA PRASAD	18	17
22	SRIKANTH PRADHAN	19	17
23	SRIVACH PRADHAN.	20	16

✱ FIELD TRIP ✱

Station: Baruva.

Date: 28-01-2022

Topic: Marine Aquaculture Hub in Baruva - Kothuru visit.

We are visit to the Marine Aquaculture Hub in Baruva Kothuru on Jan-28-2022, along with the students.

In their place many small fish preservation places/artificial storages are present. In this more Marine fishes are preserved where is low demand or low market rate.

I explain the about the advantages of fish preservation and morphological structure of marine fishes, how marine fishes are different than the freshwater fishes. How the fishes are preserved for long time, what we will following the maintenance rules.

The students are asked me more doubts as question type:

1. why marine fishes are have the small scales?
2. why Fresh water fishes are more small than the marine fishes?
3. why in our localities fresh water culture is low than the east west district?

11. what are the advantages of Freshwater aqua in the future generations?

I clarified the different doubts of the students. More advantages and more feature is there in the fresh water aquaculture. Why because to day more losses are there in the agriculture field. So we will advise to the farmers convert to the Secondary agriculture system like poultry, Dairy farm, Aqua etc.

We are visited the Fresh water Fish pond culture near of palasa. All students are clarified their doubts directly observed the fish pond and their locations. After the students asked the more doubts are about the fish culture of the fish management. After the field trip all students will come back to the college.

Can be half of zoology dep

K. Hemasundara Rao..

Lecturer in Zoology

K. HEMASUNDARA RAO
Lecturer in Zoology
Govt. Degree College
BARUVA

Name of the student	Signature of the student
B. Girija	B. Girija
B. Devi	B. Devi
B. Neelima	B. Neelima
CH. Chandini	CH. Chandini
D. Mamatha	D. Mamatha
D. Swathi	Swathi
T. Uma	T. UMA
T. Jayajakshi	T. Jayajakshi
M. Yamuna	M. Yamuna
Nirmala pradhan	N. pradhan
N. pooja	N. pooja
R. Meema	R. Meema
S. Lavanya	S. Lavanya
M. Suneetha	M. Suneetha
T. Kavya	T. Kavya
V. Dhavalaxmi	V. Dhavalaxmi
N. Neeraja	N. Neeraja
J. Lakshmi	J. Lakshmi
N. Surya	N. Surya
M. Krishana	M. Krishana
N. Sivaprasad	N. Sivaprasad
Srikanth. pradhan	Srikanth Pradhan
Srivath pradhan	Srivath pradhan

Course Attendance particulars:-

		Course Attendance											
		Days: 1 2 3 4 5 6 7 8 9 10 11 12 13											
1	B. Giniya							A	b	b	b	b	b
2	B. Dudi							A	b	b	b	b	A
3	B. Neelima							A	b	b	b	b	b
4	Ch. Chandini							A	b	b	b	b	b
5	D. Mawatha							A	b	b	b	b	A
6	D. Swathi							A	b	b	b	b	A
7	D. Uma							A	b	b	b	b	A
8	J. Toppakelli							A	b	b	b	b	A
9	M. Yamuna							A	b	b	b	b	A
10	Nirmala pradhan							A	b	b	b	b	A
11	N. pooja							A	b	b	b	b	A
12	R. Meena							A	b	b	b	b	A
13	S. Lavanya							A	b	b	b	b	A
14	M. Sureshtha							A	b	b	b	b	A
15	J. kavya							A	b	b	b	b	A
16	V. Dhara/laxmi							A	b	b	b	b	A
17	N. Narajin							A	b	b	b	b	A
18	J. Laxmi							A	b	b	b	b	A
19	N. Surva							A	b	b	b	b	A
20	M. Kori Shana							A	b	b	b	b	A
21	N. Siva prasad							A	b	b	b	b	A
22	Srikanth pradhan							A	b	b	b	b	A
23	Sriharsh pradhan							A	b	b	b	b	A

[illegible]

	39	40	41	42	43	44	45
1	P	P	P	A	P	P	P
2	P	A	P	P	P	P	P
3	P	P	P	P	P	P	A
4	P	P	P	P	A	P	P
5	P	P	P	P	P	P	P
6	P	A	P	P	P	P	P
7	P	P	P	P	A	P	P
8	P	P	A	P	P	P	A
9	P	P	P	A	P	P	P
10	A	P	P	P	P	P	P
11	P	P	P	A	P	P	P
12	P	P	P	P	P	P	A
13	P	A	P	P	A	P	P
14	P	P	P	A	P	P	P
15	P	A	P	P	P	P	P
16	P	P	P	P	P	A	P
17	P	P	A	P	P	P	P
18	P	P	P	P	P	A	P
19	P	P	A	P	P	P	P
20	P	P	P	P	P	A	P
21	P	P	A	P	P	P	P
22	P	P	P	P	A	P	P
23	P	A	P	P	P	P	P
				A			
		A					