

F-4676

Sub. Code

7MZO4E1

**M.Sc. DEGREE EXAMINATION, APRIL 2021 &
Supplementary/Improvement/Arrear Examinations**

Fourth Semester

Zoology

Elective: FISHERY BIOLOGY AND AQUACULTURE

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

Write a short notes on:

1. Trap nets
2. Cod liver oil
3. *Ex situ* conservation
4. Smoking
5. Pen culture
6. *Catla catla*
7. Rotifer
8. pH
9. Race culture
10. Gill rot

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write a note on economic importance of marine fishes.

Or

- (b) Give a brief note on morphometric characters of fishes.

12. (a) How will you differentiate *In situ* conservation from *Ex situ* conservation?

Or

- (b) What are the biochemical methods used to examine the freshness of the fish?

13. (a) List out the important cultivable species of freshwater fishes.

Or

- (b) Write a note on cage culture system.

14. (a) Give a brief account on larval production.

Or

- (b) Give a brief account on bio – security.

15. (a) Write a note on integrated fish farming.

Or

- (b) Give a brief account on open culture system.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Explain in detail about the fish reproduction and spawning.
 17. Give an elaborate account on fish processing methods.
 18. Explain in detail about the design and construction of fish culture pond.
 19. Write an essay on live feed production.
 20. Give an account on water quality management in freshwater fish culture.
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F-4675

Sub. Code

7MZO4C1

**M.Sc. DEGREE EXAMINATION, APRIL 2021 &
Supplementary/Improvement/Arrear Examinations**

Fourth Semester

Zoology

ANIMAL BIOTECHNOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

Write a short note on :

1. NBTB
2. Biotechnology
3. Selectable markers
4. Phage vectors
5. Molecular markers
6. RT-PCR
7. Mono layer
8. He La cells
9. Super ovulation
10. Microinjection method

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Briefly explain principles of r-DNA technology.

Or

- (b) Write the scope of biotechnology.

12. (a) Explain the plasmid isolation and purification method.

Or

- (b) Write about the gene cloning vectors for yeast.

13. (a) Write notes on screening of recombinant clones.

Or

- (b) Briefly explain the nucleic acid hybridization technique.

14. (a) Write about cell lines and its applications.

Or

- (b) Write about the cell culture products and their applications.

15. (a) Write a note on embryo transfer.

Or

- (b) Discuss the ethical implications on transgenic animals.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Write an account on application of genetic engineering.
 17. Write an account on isolation and purification of DNA.
 18. Write an essay on molecular markers and their applications in PCR.
 19. Write an account on Stem cell types and its culture methods.
 20. Give an account on gene knock out technology.
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