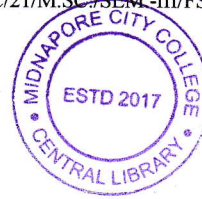


PG CBCS
M.Sc. Semester- III Examination, 2022
FISHERIES SCIENCE
PAPER: FSC 301



Full Marks: 40

Time: 2 Hours

Write the answer for each unit in separate sheet

UNIT: FSC-301.1

FISH PATHOLOGY AND DISEASE MANAGEMENT

F.M.: 20

GROUP-A

- 1. Answer any TWO from the following questions:** **2×2=4**
- a) Write the name of two non-infectious diseases in shrimp.
 - b) Write down the names of two common fungal pathogens of fish.
 - c) What are the common measures taken for bacterial disease treatment in fish pond?
 - d) Add a note on common prophylactic measures of brown spot diseases in shrimp.

GROUP-B

- 2. Answer any TWO from the following questions:** **2×4=8**
- a) Write down the causative agents and symptoms of WSSV.
 - b) Write short note on Bacterial Septicemia.
 - c) Add a note on Luminescent Bacterial Disease.
 - d) Write note on Black gill disease of *Penaeus monodon*.

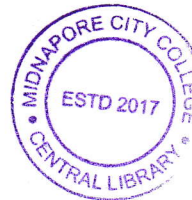
GROUP-C

- 3. Answer any ONE from the following questions:** **1×8=8**
- a) Write down the causative agents, symptoms and prophylactic measures of EUS. **(1+3+4)**
 - b) Give an account of general sign and clinical sign observed for fish diseases identification. Discuss about best shrimp health management practice. **(3+5)**
- (P.T.O)**

UNIT: FSC-301.2
FISH PARASITOLOGY AND IMMUNOLOGY

F.M.: 20

GROUP-A



4. Answer any **TWO** of the following questions:

2×2=4

- a) What do you mean by cell mediated immunity?
- b) Write names of two primary lymphoid organs.
- c) State the role of monocytes in fish immune systems.
- d) Distinguish between ecto and endo parasites.

GROUP-B

5. Answer any **TWO** of the following questions:

2×4=8

- a) Write the difference between adaptive and innate immunity.
- b) Briefly describe the structure of IgM with diagram.
- c) Give a brief account of life cycle of crustacean parasites.
- d) What are the properties of the ideal vaccine?

GROUP-C

6. Answer any **ONE** of the following questions:

1×8=8

- a) With the help of the diagram describe the morphology and life cycle of any helminth parasites?
(4+4)
- b) Define host. Give an account on host-parasite interaction with examples.
(2+6)

Total pages: 02

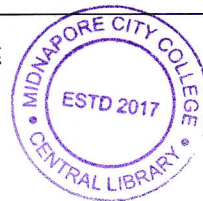
PG CBCS
M.Sc. Semester- III Examination, 2022
FISHERIES SCIENCE
PAPER: C-FSC 304

Full Marks: 40

Time: 2 Hours

Write the answer for each unit in separate sheet

UNIT: C-FSC 304.1
AQUACULTURE TECHNOLOGY
F.M.: 20



GROUP-A

1. Answer any **TWO** from the following questions:

2×2=4

- a) Mention the name of traditional crafts used in Andhra Coast.
- b) What are the applications of transgenesis in aquaculture?
- c) What is fish by product?
- d) What do you mean by inter-specific hybridization?

GROUP-B

2. Answer any **TWO** from the following questions:

2×4=8

- a) Briefly explain the solvent extraction procedure of fish oil preparation?
- b) Describe isinglass with commercial significance.
- c) Give an account of traditional fish preservation methods in fish landing centers?
- d) Give an account of transgenic fish?

GROUP-C

3. Answer any **ONE** from the following questions:

1×8=8

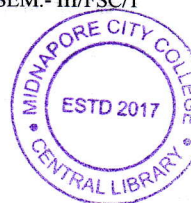
- a) What do you mean by active and passive fishing gear? Briefly describe traditional fishing gear used in West Bengal. (3+5)
- b) Write down the process of fish meal preparation? What are the uses of fish meal? (6+2)

(P.T.O.)

UNIT: C-FSC 304.2
FISHERIES ENTREPRENEURSHIP DEVELOPMENT

F.M.: 20

GROUP-A



4. Answer any **TWO** of the following questions:

2×2=4

- a) What do you mean by fishery extension?
- b) What are the objectives of cooperative society?
- c) Write down the criteria of Entrepreneur?
- d) State non-formal education.

GROUP-B

5. Answer any **TWO** of the following questions:

2×4=8

- a) What do you mean by Vicious Circle Poverty (VCP) model?
- b) Discuss on extension teaching methods for fish farmers.
- c) Write on the employment potentiality in fisheries sectors.
- d) State about the advantages and disadvantages of co-operative society.

GROUP-C

6. Answer any **ONE** of the following questions:

1×8=8

- a) Write a short note on extension education. Enlist different laws related to fisheries in India?
(4+4)
- b) State the circumstances favoring the entrepreneurship development. Write down the principles of extension education.
(4+4)
