

2025

M.Sc. 3rd Semester Examination
FISHERIES SCIENCE

Paper : FSC - 302

**(Immunology, Genetic Engineering and
Bio-instrumentation)**

Full Marks : 25

Time : One Hour

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

1. Answer any *two* questions : 2×2=4
 - (a) What is Western blotting technique? State its utility.
 - (b) State the principle of chromatography.
 - (c) What is the difference between innate and acquired immunity?
 - (d) What is DNA fingerprinting?
2. Answer any *two* questions : 4×2=8
 - (a) What are antibodies? Describe the structure and function of an antibody. 1+3
 - (b) What is phagocytosis? Briefly discuss on mechanism of Phagocytosis. 1+3

P.T.O.

(2)

(c) Discuss the status and importance of various categories of fish vaccines and the procedures of application. 3+1

(d) Write the principle of centrifugation technique. Derive the equation for the calculation of relative centrifugal force (RCF). 1+3

3. Answer any *one* question : 8×1=8

(a) Write the principle of electrophoresis. Describe the procedure of SDS-PAGE technique and its application. 2+6

(b) Briefly describe different immunogenic organs and their function in teleost fish. 8

Internal Assessment : 5 marks
