Part II only

INDEX NUMBER: .....

UNIVERSITY OF RUHUNA

FACULTY OF FISHERIES AND MARINE SCIENCES & TECHNOLOGY

Academic Year 2023/2024

Bachelor of Science Honours in Fisheries and Marine Sciences Degree/ Bachelor of Science Honours in Marine and Freshwater Sciences Degree

Level II Semester-I Examinations – Oct/Nov/2024

LIM 2111: Physics of Water **Time: 1 hour**

Instructions:

- Answer **all the questions in part I** (Structural type) in the provided space and **do not write any part of the answer in writing papers.**
- Select **only one question in part II** (Essay type) and write your **answer in the writing papers** provided.

Part-I

Part –II

Answer only <u>one (01)</u> question

1. Supercritical water oxidation is an environmentally friendly technique for solid waste management, offering advantages over traditional incineration.
   a. Define the term "Supercritical Water".
   (10 Marks)
   b. What is the difference between the processes of supercritical water oxidation and general incineration?
   (10 Marks)
   c. Illustrate the process of supercritical water oxidation using a suitable diagram.
   (10 Marks)
   d. Briefly describe the reasons for considering supercritical water oxidation as an environmentally friendly method for waste management.
   (20 Marks)

2. Compare the following pairs and provide suitable diagrams wherever necessary.
   1. Internal velocity profiles of laminar flow and turbulent flow
   2. Tripple point and critical point of water
   3. Adhesion and cohesion properties of water
   4. Active SONAR and passive SONAR
   5. Compound section and composite section of an open canal

   (10 x 5 = 50 Marks)

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