

Part II only

UNIVERSITY OF RUHUNA
FACULTY OF FISHERIES AND MARINE SCIENCES & TECHNOLOGY
Academic Year 2022/2023

Bachelor of Science Honours in Marine and Freshwater Sciences Degree

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

LIM 3222: Hydraulic Control Structures and Reservoirs

INDEX NUMBER:

Time: 1 hour and 30 minutes

Part-1

Answer all question

Part II

Answer only two (02) questions

1. "Dam construction needs an extensive analysis of economic, social, and environmental aspects to minimize negative impacts and maximize benefits". Justify this statement by giving suitable examples. (50 Marks)
2. Riverbank failure is one of the major challenges in water resource management, and as a riverbank stabilization methods, the applications of vegetation is helpful.
 - i. List possible reasons for riverbank failures. (10 Marks)
 - ii. What are the major factors that must be considered when stabilizing riverbank with vegetation? (10 Marks)
 - iii. Write a comparative account on the advantages and disadvantages of riverbank stabilization using vegetation, in comparison to other methods. (30 Marks)
3. Compare the followings providing suitable diagrams.
 - i. Denil fish pass and pool fish pass
 - ii. Radial gate and stop-log gate
 - iii. Arch dam and buttress dam
 - iv. Ogee spillway and shaft spillway
 - v. Crest-type gates and deep-seated gates

(10 x 5 = 50)