



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

Bachelor of Science Honours in Fisheries and Marine Sciences Degree  
Bachelor of Science Honours in Marine and Freshwater Sciences Degree  
Level III Semester I Examinations – April / May 2024

LIM 3142: Water Treatment Technology

Time: 1 hour and 30 minutes

Answer only three (03) questions

1. i. "The water treatment industry is a rapidly growing economic sector in the world". Justify this statement. (25 Marks)  
ii. Discuss the human health issues due to poor quality drinking water and steps that can be adopted to improve water quality in the treatment process. (75 Marks)
2. "Reverse Osmosis technology will be a promising solution in arid coastal countries" Justify this statement by highlighting the principle of Reverse Osmosis. (100 Marks)
3. i. What are the factors affecting the settling velocity of a particle in a settling tank? (25 Marks)  
ii. Describe how the sludge blanket in a settling tank affects the particle removal efficiency. (40 Marks)  
\*iii. Describe the importance of the aeration process in municipal water treatment. (35 Marks)
4. Write short notes on the following topics.  
(i) Water requirement for the semiconductor industry. (25 Marks)  
(ii) Backwashing process of rapid sand filters. (25 Marks)  
(iii) Electro deionization. (25 Marks)  
(iv) pH adjustment in water treatment. (25 Marks)

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