

UNIVERSITY OF RUHUNA

BACHELOR OF SCIENCE HONOURS IN FISHERIES AND MARINE SCIENCES  
DEGREE

Level IV Semester I Examination August/September 2018

LIM 4121 Geological and Geographical Aspects related to Aquatic Systems

Time: 01 hour

Answer any two questions

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1. Providing examples, briefly describe the way of modifying the baseline  $H^+$  concentration in water by
  - a. Weathering reactions.
  - b. Ion exchange reactions
  - c. Microbial mediated redox processes
  - d. Abiotic redox reactions
  
2. Giving suitable examples, briefly explain the effect of following factors on changing the surface charge of colloidal particles
  - a. pH of water
  - b. Ion absorption
  - c. Ion replacement
  
3. How does the distribution of inorganic carbon species (free- $CO_2$ ,  $HCO_3^-$  and  $CO_3^{2-}$ ) regulate the water quality of natural aquatic systems.

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