

UNIVERSITY OF RUHUNA

BACHELOR OF SCIENCE HONOURS IN FISHERIES AND MARINE SCIENCES
DEGREE

Level IV Semester I Examination August/September 2018

LIM 4122 Geological and Geographical Aspects related to Aquatic Systems

Time: 01 ½ hours

Answer all questions

1. Providing examples, briefly describe the mechanism 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. Describe the effect of the distribution of inorganic carbon species (free- CO_2 , HCO_3^- and CO_3^{2-}) in the regulation of water quality in natural aquatic systems

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