



**RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES**

**B.Sc. (Special) Degree in Applied Biology
Fourth Year – Semester I Examination – January/February 2021**

BDC 4202 – WETLAND CONSERVATION AND MANAGEMNET

Time: Two (02) hours

Answer ALL questions.

1. a) Explain briefly, why it is important to have a precise wetland definition. **(30 marks)**
 - b) Although the concepts of shallow water or saturated conditions, unique wetland soils, and vegetation adapted to wet conditions are fairly straightforward, combining these three concepts to obtain a precise wetland definition is difficult.
Discuss briefly **five (05)** reasons, why it is difficult to obtain a precise wetland definition using above mentioned concepts. **(70 marks)**
2. a) Discuss **four (04)** physiological features other than percentage of organic carbon that can be used to differentiate organic soils from mineral soils. **(40 marks)**
 - b) Explain briefly the following topics with reference to wetlands:
 - i. Redox concentrations
 - ii. Oxidized rhizosphere
 - iii. Reduced matrices and redox depletion **(3x20 marks)**
3. a) There is usually a thin layer of oxidized soil, sometimes only a few millimeters thick, at the soil–water interface in wetlands. State **four (04)** factors that are directly related to the thickness of this oxidized layer. **(20 marks)**
 - b) Provide a detailed account on the nitrogen cycle of wetlands. **(80 marks)**
4. a) Discuss the possible adverse effects of climate change on coastal wetlands. **(50 marks)**
 - b) Explain conservation measures that can be used to protect the coastal wetlands against the adverse effects of climate change. **(50 marks)**

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