



**Academic Year 2023/2024**

**Bachelor of Science Honours in Fisheries and Marine Sciences Degree**

**Bachelor of Science Honours in Marine and Freshwater Sciences Degree**

Level II Semester I Examinations – October-November 2024

## LIM 2141: Biodiversity and Evaluation Strategies

**Time: 1 hr and 15 minutes**

**Total Marks: 85**

**Answer all questions.**

1. Discuss the uses of multiple aspects in the functional diversity of macroinvertebrates in a stream ecosystem.

(40 Marks)
2. The abundance values (number/m<sup>2</sup>) of aquatic plants in a reservoir are given in the following table. Using the given data,
  - i) Calculate the biological diversity of aquatic plants in the reservoir.
  - ii) Comment on the possible influence of reservoir water quality on the biological diversity of aquatic plants using suitable graphical illustrations.
  - iii) Identify Keystone species categories of aquatic plants in the reservoir and list their possible ecological functions.

| Species categories of Aquatic plant | Abundance (number/m <sup>2</sup> ) |
|-------------------------------------|------------------------------------|
| <i>Typha latifolia</i> .            | 10                                 |
| <i>Nymphaea</i> sp.                 | 4                                  |
| <i>Pistia</i> sp.                   | 12                                 |
| <i>Ceratophyllum</i> sp.            | 46                                 |
| <i>Chara</i> sp.                    | 43                                 |
| <i>Eichornia</i> sp.                | 4                                  |
| <i>Eleocharis</i> sp.               | 36                                 |
| <i>Hydrilla</i> sp.                 | 32                                 |

(45Marks)

$a a a a a a a a a a a$