# 2025

## M.Sc. 1st Semester Examination

## ENVIRONMENTAL SCIENCE

### Paper : EVSC407X9

### (Environmental Analysis Lab IB)

### [Practical]

Full Marks : 50 Time : Four Hours

*The figures in the margin indicate full marks.*

1. Perform quadrate analysis of the mentioned side/chart. Determine frequency, abundance and density of five major plants. 10

2. Waste Management.

   A 2kg sample of mixed municipal solid waste is provided.

   (a) Perform a physical segregation of the waste into :

   Biodegradable organic matter

   Recyclable plastics and paper

   Inter materials (glass/stones)

   (b) Calculate the percentage composition by weight for each category.

P.T.O.

(c) Briefly state the suitability of the organic fraction for vermicomposting. 3+3+4=10

3. Statistical Design and Application.

(a) Provide a schematic diagram for a Randomized Block Design (RBD) to test the effect of three different organic fertilizers (A, B, C) on the height of a crop with four replications.

(b) Explain why "randomization" is essential in this experimental design.

(c) Calculate the Mean and Median for the following five plant heights (cm) : 12, 15, 12, 18, 20. 4+3+3=10

4. How to layout an experimental design following RCB methods? What are sampling techniques? 5+5=10

5. Notebook and Viva-voce. 10