

MSLIS Semester 4
MIDTERM TEST
Paper 21: Geographical Information Science
09 March 2022
(15.30 - 17.00)

Q1. What is scale? Write briefly about the impact of scale of the map on the characterization? **[10 Marks]**

Q2. Fractal Dimension is a measure to quantify the spatial complexity of features. Explain the following: **[15 Marks]**

- (i) Koch curves and the computation of their fractal dimensions
- (ii) Box Counting Method
- (iii) Computation of fractal dimension for branched networks

Q3. Topographic maps and Digital Elevation Models provide numerous ways to characterize the complexity. Explain how the following methods can be used in understanding surficial complexity. **[15 Marks]**

- (i) Hypsometric integral
- (ii) Grayscale granulometries.