

**ST JOSEPH’S UNIVERSITY, BENGALURU-27**

**M.Sc. ENVIRONMENTAL SCIENCE AND SUSTAINABILITY - II SEMESTER**

**SEMESTER EXAMINATION: APRIL 2023**

(Examination conducted in May 2023)

**ES 8422: GEOSPATIAL AND WEB-GIS APPLICATIONS**

(For current batch students only)

**Time - 2 Hours Max Marks - 50**

**This question paper contains one printed page and three parts**

**Part A**

**Answer any five of the following 2m X 5q = 10m**

1. Expand GIS and name the key components of GIS.
2. Define Temporal Resolution.
3. What is Active Remote Sensing?
4. Differentiate between Raster data and Vector data.
5. Define Scale of map. What does 1:50,000 Scale mean?
6. Expand GNSS. Name any two Mobile data collection apps.
7. What is a Shape file? What is the full form of EPSG?

**Part B**

**Answer any four of the following 5m X 4q = 20m**

1. Differentiate between Spatial data and non-Spatial data.
2. Explain Small-scale maps and Large-scale maps with examples.
3. What is an Electromagnetic Spectrum? UV rays cannot to be used to collect the information. Why?
4. Write notes on Spectral resolution and Radiometric resolution.
5. Discuss the errors in GPS Observation.
6. Explain Union overlay operation and Intersection overlay operation with examples.

**Part C**

**Answer the following 10m X 2q = 20m**

1. a. With the help of a diagram, explain the process of Remote Sensing.

**OR**

b. What is Buffer analysis? Explain its uses with examples.

1. a. Explain the three segments (Space, Control and User) of GNSS.

**OR**

b. Differentiate between Open-source software and Proprietary software. Cite two examples for each.