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

Registration Number:

Date & session:

**M.Sc. (ENVIRONMENTAL SCIENCE AND SUSTAINABILITY) – II SEMESTER**

**SEMESTER EXAMINATION: APRIL 2024**

**(Examination conducted in May / June 2024)**

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

 **(For current batch students only)**

**Time: 2 Hours Max Marks: 50**

1. **This paper contains one printed page and THREE parts**
2. **Instructions: Write diagrams wherever necessary**

**PART – A**

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

1. Differentiate between open source and proprietary software.
2. Expand EPSG & WGS.
3. Name all four mandatory shapefile extensions.
4. What is a small-scale map? Cite an example.
5. What is remote sensing? Represent the concept in a diagram.
6. What is the full form of NavIC? Cite any two of its applications.
7. Define Georeferencing. What is the significance of ground control points?

 **PART – B**

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

1. Define and explain the types of spatial data.
2. What is electromagnetic spectrum? Explain spectral resolution.
3. Define a polygon. What features does a polygon represent? When is polygon preferred over a line?
4. Name the segments of GNSS. Briefly explain the space segment.
5. What is interpolation? Discuss the advantages of interpolation.
6. What is a sensor? Name any two Indian satellite sensors with their applications.

**PART – C**

**Answer ALL the questions 2q X 10m = 20m**

1. Expand LISS. Explain any two *Resourcesat* *Satellite Sensors*.

**OR**

Explain the process of mobile data collection using ODK collect App.

1. Discuss the latest innovations in RS & GIS. Elaborate on two of its applications.

**OR**

Describe any 4 Components of GIS.