**20CE32P2 –REMOTE SENSING & GIS LABORATORY**

**(Civil Engineering)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Course Category**  | Professional core | **Credits** | 1.5 |
| **Course Type** | Practical | **Lecture - Tutorial - Practical** | 0 - 0 - 3 |
| **Prerequisite** | Remote sensing & GIS | **Sessional Evaluation**  | 40 |
| **Semester End Exam Evaluation** | 60 |
| **Total Marks** | 100 |

|  |  |  |
| --- | --- | --- |
| **Course Outcomes** | CO1 | Interpret a satellite image |
| CO2 | Perform orientation of photographs |
| CO3 | Map earth surface features |
| CO4 | Compute geometric measurements  |
| CO5 | Perform spatial analysis |
| CO6 | Integrate different geospatial layers |
| **Course****Content** | **LIST OF EXPERIMENTS**1. Importing maps and layers from various sources
2. Spatial resolution of a satellite image
3. Image enhancement
4. Generation of map with legends
5. Georeferensing
6. Supervised classification of a satellite image
7. Unsupervised classification of a satellite image
8. Digitization of points, lines and polygons
9. Attribute data entry
10. Overlay analysis- intersection, union, erase, identity
11. Buffer analysis
12. Data interpolation-Inverse distance weighting method
13. Generation of contour map from point data
14. Generation of digital elevation model from point data
 |

**CO-PO Mapping:** 3-High Mapping, 2-Moderate Mapping, 1-Low Mapping, - -Not Mapping

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** | **PSO1** | **PSO2** | **PSO3** |
| **CO 1** | - | 1 | - | 1 | 3 | - | - | - | 2 | - | - | 1 | 3 | - | 2 |
| **CO 2** | - | - | - | - | 3 | - | - | - | 2 | - | - | 1 | 3 | - | 2 |
| **CO 3** | - | - | - | - | 3 | - | - | - | 2 | 1 | - | 1 | 3 | - | 2 |
| **CO 4** | 1 | 2 | - | 2 | 3 | - | - | - | 2 | 1 | 1 | 1 | 3 | 2 | 3 |
| **CO 5** | 1 | 2 | - | 2 | 3 | - | - | - | 2 | 1 | 1 | 1 | 3 | 2 | 3 |
| **CO 6** | 1 | 3 | - | 3 | 3 | 2 | - | - | 2 | 1 | 1 | 1 | 3 | 3 | 3 |