Roll No. | | | | | | | | | | |

ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)

B.E. / B. Tech / B. Arch (Full Time) - END SEMESTER EXAMINATIONS, NOV / DEC 2023

B.E. GEOINFORMATICS
6th Semester
GI5601 SPATIAL ANALYSIS AND APPLICATIONS
(Regulation 2019)

Time: 3hrs Max. Marks: 100

CO 1	Analyse Raster Data using various GIS Operations.
CO 2	Process Vector Data using SQL and other analysis tools.
CO 3	Understand Network data Model and its applications.
CO 4	Perform Surface and Geostatistical analysis functions on spatial data.
CO 5	Understand basics of scripting, WebGIS and LBS.

BL – Bloom's Taxonomy Levels
(L1 - Remembering, L2 - Understanding, L3 - Applying, L4 - Analysing, L5 - Evaluating, L6 - Creating)

PART- A (10 x 2 = 20 Marks)
(Answer all Questions)

Q. No	Questions	Marks	CO	BL
1	What is the difference between Local and Neighborhood operations?	2	1	1
2	What are the filtering operations performed in raster analysis?	2	1	1
3	What are the advantages of the vector data model?	2	2	1
4	Describe the concept of topology.	2	2	2
5	Differentiate geocoding and georeferencing.	2	3	2
6	Describe the advantages of the location-allocation analysis.	2	3	2
7	What is interpolation, and list out its types?	2	4	1
8	Differentiate Viewshed and Watershed analysis.	2	4	2
9	What are the advantages of Web GIS?	2	5	1
10	Describe LBS.	2	5	2

PART- B (5 x 13 = 65 Marks)
(Restrict to a maximum of 2 subdivisions)

Q. No	Questions	Marks	CO	BL
11 (a)	Examine the various types of local operations in raster analysis.	13	1	3
	OR			
11 (b)	Evaluate the significance of cost distance analysis in determining the optimal routes.	13	1	3
12 (a)	Examine the various types of vector overlay analysis.	13	2	3
	OR			
12 (b)	Evaluate the various types of vector data transformation techniques.	13	2	3
13 (a)	Examine the significance of the network analysis in GIS.	13	3	3
	OR			
13 (b)	Evaluate the use of the geocoding process in healthcare and crime analysis applications.	13	3	3
14 (a)	Analyze the significance of the various interpolation techniques and which method is suitable for studying pollution modeling.	13	4	4

	OR			
14 (b)	Examine the working flow of the watershed analysis in GIS.	**13**	4	4
15 (a)	Examine the difference between Web GIS Architecture and Desktop GIS.	**13**	5	3
	OR			
15 (b)	Evaluate the use of Web GIS in various real-time applications.	**13**	5	3

PART- C (1 x 15 = 15 Marks)

(Q.No.16 is compulsory)

Q. No	Questions	Marks	CO	BL
16.	Choose and justify the most appropriate vector/raster data analysis for the following applications. a) Pollution modeling b) Shortest route analysis c) Island demarcation d) Site suitability analysis e) Attribute Query	**15**	2	5