Roll No.

ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)
B.E. / (Full Time) - ARREAR EXAMINATIONS, APR / MAY 2024
GEOINFORMATICS
III Semester
GI 5301 & SPATIAL DATABASE MANANAGEMENT SYSTEM
(Regulation 2019)

Time: 3hrs Max.Marks: 100

CO 1 To introduce the concepts, classification, architecture of DBMS, SDBMS
CO 2 To provide the information on Field Based, Object Based, ER, Relational and UML Models
CO 3 To enable the SQL, Extended SQL, for handling Spatial and Non Spatial Queries
CO 4 To show the methods of storing, Indexing, Database Recovery and Data Security Concepts
CO 5 To give the Design and Development Environment of Spatial Data

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	Contrast Tuple Vs Relation.	2	1	L2
2	Distinguish GIS Vs SDBMS	2	1	L2
3	List any four Non-Topological operations.	2	2	L1
4	Specify the significance of Pictogram.	2	2	L2
5	Write the basic form of SQL query.	2	3	L1
6	Write the function of Union in Set operation?	2	3	L2
7	What is the use of Buffer Manager?	2	4	L2
8	Differentiate File Vs Record.	2	4	L2
9	What do you mean by Spatial Geometry?	2	5	L2
10	Mention the features of Spatial Database?	2	5	L2

PART- B (5 x 13 = 65 Marks)

Q. No	Questions	Marks	CO	BL
11 (a) (i)	Explain the roles of Database Administrator and End user.	13	1	L4
	OR			
11 (b) (i)	Explain the classification of Database Management Systems.	13	1	L4
12 (a) (i)	Apply the concept of UML in Object Oriented Data Modelling using a suitable example.	13	2	L3
	OR			
12 (b) (i)	Apply the concept of ER model using a suitable example.	13	2	L3
13 (a) (i)	Explain the operations specified in the OGIS standard.	13	3	L4
	OR			
13 (b) (i)	Write any four Queries that emphasize Spatial aspects.	13	3	L4
14 (a) (i)	Using a suitable figure Explain the Disk Geometry.	13	4	L4
	OR			
14 (b) (i)	Explain the File Structures using a suitable example.	13	4	L4
15 (a) (i)	Explain the features of any one Commercial DBMS and Open source DBMS.	13	5	L4
	OR			
15 (b) (i)	Using a suitable example Explain modeling a Geospatial Database for managing Travelers Demand.	13	5	L4

PART- C (1 x 15 = 15 Marks)
(Q.No.16 is compulsory)

Q. No	Questions	Marks	CO	BL
16. (i)	A company has got a project for the creation of Rainfall, Temperature, Roads and Land Parcel. Evaluate the models of Spatial information and suggest the model for the above Datas.	15	2	L5