

<b>Name:</b>	
<b>Enrolment No:</b>	

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**

**Online End Semester Examination, May 2021**

**Course Name: Spatial Database System**

**Semester: VI**

**Programme Name: B. Tech GIE**

**Time: 03 hrs**

**Course Code: PEGI 3003**

**Max. Marks: 100**

**SECTION A (30 M)**

**1. Each question will carry 5 Marks**

**2. Instruction: Contains MCQ, T/F and short answer only**

S.No.	Questions	Marks	CO
Q 1	A Spatial Database system support a) Spatial join b) Data Mining c) Spatial Indexing d) All are true	<b>05 (5x1)</b>	<b>CO3</b>
	B Which is not a basic spatial data type? a) Line b) Point c) Networks d) Polygon		
	C A B+ tree data structure of order 5 can have internal node of a) 5 children and 3 keys b) 3 children and 2 keys c) 2 children and 1 keys d) 4 children and 4 keys		
	D SQL commands GRANT are used for a) Data Manipulation b) Data retrieval c) Database access control d) Data definition		
	E SQL commands CONSTRAIN and CHECK are used for a) Data Sharing b) Data retrieval c) Data Integrity d) Data definition		
Q 2	A Un-Supervised classification model is generally having a) Database Management system b) Relational database management system c) Object Relational management system	<b>05 (5x1)</b>	<b>CO1</b>

	<p>d) Object oriented management system</p> <hr/> <p>B KDT data structure can be of</p> <p>I. Balanced tree structure</p> <p>II. Non-balanced tree structure</p> <p>III. Balance and non-balance tree structure</p> <hr/> <p>C In B+ tree data structure, data values are present in</p> <p>a) Leaf node</p> <p>b) Internal node</p> <p>c) Root node</p> <p>d) All are correct</p> <hr/> <p>D In B tree data structure data values are present in</p> <p>I. Leaf node</p> <p>II. Internal node</p> <p>III. Root node</p> <p>IV. All are correct</p> <hr/> <p>E Important information through data mining can be extracted with</p> <p>a) Statistical</p> <p>b) Visualization</p> <p>c) Machine learning</p> <p>d) All of above</p>		
Q 3	<p>Write True/ False</p> <p>a) Data structure increases the search time of data (T/F)</p> <p>b) Time series analysis comes under supervised learning (T/F)</p> <p>c) Range query is key data structure application (T/F)</p> <p>d) Oracle database uses space driven structure (T/F)</p> <p>e) KDD stands for knowledge discovery in database (T/F)</p>	05 (5x1)	CO1
Q 4	List out key features of spatial database system.	05	CO1
Q 5	What is Difference between B and B+ tree data structure	05	CO3
Q6	List out the names of common database models	05	CO1
<b>SCETION B (50 M)</b>			
<p><b>1. Each question will carry 10 Marks</b></p> <p><b>2. Instruction: Write short note</b></p>			
Q 7	List out the various Database Security and Integrity Constraints being applied in Spatial Database System	10	CO4
Q 8	Evaluate R tree data structure with example	10	CO4
Q 9	Construct a 3 dimensional balanced KDT data structure from data sets; (1,4,6),(5,4,2), (5,9,2),(1,8,7),(6,7,3),(9,7,2),(6,7,8),(7,7,7),(7,6,9),(2,2,3),(3,4,4),(5,5,5),(9,9,9),(2,2,9), (9,8,7)	10	CO3
Q 10	Explain in detail on machine learning data mining methods.	10	CO1
Q 11	Discuss in detail on object oriented model and object relational model.	10	CO3
<b>OR</b>			

