*Total No of Questions: [12]* *SEAT NO. :*

[Total No. of Pages : 2 ]

# *B.E. 2008 (Computer Engineering)*

## *Advanced Databases*

## *(Elective - III) (Semester - II)*

*Time: 3 Hours* *Max. Marks : 100*

*Instructions to the candidates:*

1) *Answers to the two sections should be written in separate answer books.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Figures to the right side indicate full marks.*
4) *Section I: Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6*
5) *Section II: Q.7 or Q.8, Q.9 or Q.10, Q.11 or Q.12*
6) *Assume Suitable data if necessary*

## SECTION I

| | | | |
|---|---|---|---|
| Q1) | a) | Compare the Round-robin and Range partitioning Techniques . | [8] |
| | b) | Explain Fragment and Replicate Join. | [8] |
| | | OR | |
| Q2) | a) | What is meant by Skew? Explain the different ways of handling Skew. | [10] |
| | b) | What is the difference between interquery and intraquery parallelism? | [6] |
| Q3) | a) | If we are to ensure atomicity , all sites in which a transaction T is executed must agree on the final outcome of the execution .T must either commit at all sites or it must abort at all sites. Describe the Protocol used to ensure this property . | [8] |
| | b) | Explain in detail Replication with respect to Distributed Databases. | [10] |
| | | OR | |
| Q4) | a) | Remote backup systems and replication in Distributed Databases are two alternative approaches for providing high availability . Explain the difference between them. | [6] |
| | b) | How Deadlock handling is done in Distributed Databases? Explain. | [12] |
| Q5) | a) | How XML data is stored in Relational Databases? Explain. | [8] |
| | b) | Explain in detail XML schema. | [8] |
| | | OR | |
| Q6) | a) | Explain in detail XQuery. | [10] |
| | b) | Write short note on : XML applications. | [6] |

## SECTION II

| | | | |
|---|---|---|---|
| Q7) | a) | In real world data, tuples with missing values for some attributes is a common occurrence . Describe various methods for handling this problem. | [10] |
| | b) | Explain with suitable example any two operations on multidimensional data. | [6] |
| | | OR | |
| Q8) | a) | Explain the following with respect to data preprocessing<br>i)Data reduction ii) Data Decretization | [6] |
| | b) | Explain different conceptual schemas design for data warehouse with suitable example. | [10] |
| Q9) | a) | Explain classification and prediction with suitable example. | [8] |
| | b) | Explain outlier analysis. | [8] |

OR

Q10) a) How are decision trees used for classification? Explain with example. [8]

b) State and explain apriori algorithm. [8]

Q11) a) Define Information retrieval System. How it is different from Database system? [6]

b) Explain the following terms [12]

i)Web Crawlers ii) Vector space model iii) Synonyms iv) Proximity

OR

Q12) a) How to measure retrieval effectiveness? [6]

b) Explain the following terms [12]

i)Page Rank ii) Full text retrieval iii) Ontologies iv) Homonyms