Total No. of Questions : 12]

SEAT No. :

**P2805**

[Total No. of Pages : 3

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## B.E. (Computer Engineering)

## ADVANCE DATABASES

## (2008 Pattern) (Semester - II) (Elective - III)

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

***Instructions to the candidates:***

1) ***Answer 3 questions from Section I and 3 questions from Section II.***
2) ***Answers to the two sections should be written in separate books.***
3) ***Neat diagrams must be drawn wherever necessary.***
4) ***Figures to the right side indicate full marks.***
5) ***Assume Suitable data, if necessary.***

## SECTION-I

***Q1)*** a) What are the different partitioning techniques? Explain the advantages and disadvantages of round robin partitioning techniques. **[8]**

b) What factors could result in skew and what can be done to reduce the skew? **[8]**

When a relation is partitioned on one of its attribute by

i) Hash partitioning

ii) Range partitioning

OR

***Q2)*** a) What is parallelism? Explain the difference between interquery & intraquery parallelism. **[8]**

b) Explain partitioned parallel hash join. **[8]**

***Q3)*** a) What is transparency? Explain different types of transparency in distributed system. **[8]**

b) Explain distributed transaction management and its types. **[8]**

OR

***P.T.O.***

***Q4)*** a) Explain the types of storage mechanism and failure in distributed system. **[8]**

b) Explain two phase commit protocol. How three phase commit protocol overcome the disadvantages of the two phase commit protocol. **[8]**

***Q5)*** a) Why do we have the XML DTD? Explain with an example. **[8]**

b) What is the role of middle tier? How it helps in client server communication? **[10]**

OR

***Q6)*** Write short note on the following. **[18]**

a) XQUERY

b) Cookies

c) Thin & Thick Client

d) 3tier architecture

## SECTION-II

***Q7)*** a) What are you mean by data cleaning? Explain different methods of data cleaning? **[8]**

b) Explain the components of data warehouse with a neat diagram. **[10]**

OR

***Q8)*** a) Differentiate between OLAP & OLTP. **[6]**

b) Explain the following operation on the multidimensional data. **[6]**

i) Roll up and drill down.

ii) Slicing & dicing

c) What are different types of schema? Explain the design a star schema. **[6]**

***Q9)*** a) What is clustering? Explain the K-means clustering algorithms. **[8]**

b) What is decision tree? Explain ID3 algorithm to create decision tree. **[8]**

OR

***Q10)***a) What is market basket analysis? How Apriori algorithm is useful in the market basket analysis? **[8]**

b) Explain the following terms: **[8]**

i) Frequent itemset.

ii) Outlier analysis.

***Q11)***a) What you mean by relevance ranking? Explain any methods of relevance ranking. **[8]**

b) Explain the following: **[8]**

i) Ontology

ii) Stop words

OR

***Q12)***a) What is page ranking and popularity ranking? Explain in brief. **[8]**

b) Explain the following terms. **[8]**

i) Web crawlers

ii) Vector space model.