Total No. of Questions : 12]

SEAT No. :

P1464

[Total No. of Pages : 4

[4759]-221
B.E. (Computer Engineering)
ADVANCED 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 answer books.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data, if necessary.***

SECTION-I

Q1) a) What do you mean by parallel database system? Explain its Architecture with neat diagram. **[8]**

b) Explain speed up and scale up in parallel database system. **[5]**

c) What are the different partitioning techniques in parallel database system. **[5]**

OR

Q2) a) State and explain parallel database design issues. **[8]**

b) Explain range partitioning sort in parallel database system along with its suitability. **[5]**

c) State and explain the difference between Interquery & Intraquery parallelism. **[5]**

Q3) a) State and explain different data storage technique in the distributed database system. **[8]**

b) What is Deadlock? How Deadlock is handled in the distributed database system? **[8]**

OR

P.T.O.

Q4) a) Explain any two methods to handle the concurrency control in the distributed database system. **[8]**

b) State and explain 2PC protocol. Which additional phase is added in the 3PC protocol explain its significance. **[8]**

Q5) a) What is N tier architecture? Explain its advantages with example. **[8]**

b) Explain the following with reference to the web architecture. **[8]**

i) Web server.

ii) Application server.

iii) Mail server.

iv) CGI.

OR

Q6) a) Explain the following: **[12]**

i) XML DTD.

ii) XML SCHEMA.

iii) X Query.

iv) SOAP.

b) What are the different XML parser? Explain. **[4]**

SECTION-II

Q7) a) State & explain the detailed architecture of Data warehouse with its basic components. **[8]**

b) Explain the different schema design for Data warehouse with suitable example. **[8]**

OR

Q8) a) What is noisy data? Explain data cleaning process. How missing values are handled. **[8]**

b) Explain the following operations of OLAP on multidimensional data. **[4]**

i) Roll up & drill down.

ii) Slice & dice.

c) Explain the difference between OLAP & OLTP. **[4]**

Q9) a) A Database has Six transactions. Let min support = 20% & Confidence = 75%. **[8]**

TXN ID	Items
100	X, Y, Z
200	X, Z, W
300	Y, W
400	U, V, W
500	V, Y, Z
600	U, X, Z

i) Find the frequent item set by using Apriori Algorithm.

ii) List all strong association rules.

b) Differentiate between classification & Clustering. **[5]**

c) What is outlier analysis? Explain its significance. **[3]**

OR

Q10)a) What is best split? Explain ID3 algorithm to create decision tree. **[8]**

b) Consider the following data set **[8]**

Food item	Protein content	Fat content
F1	1.1	60
F2	8.2	20
F3	4.2	35
F4	1.5	21
F5	7.6	15
F6	2.0	55
F7	3.9	39

Find the cluster for the object in the dataset by using K-means algorithm, if K = 4.

Q11)a) State the difference between data mining & Information Retrieval. **[6]**

b) Write short note on the following: **[12]**

i) Inverted Index.

ii) Ontology.

iii) TF-IDF.

OR

Q12)a) Explain the typical architecture of an Information Retrieval system. **[6]**

b) Write short note on the following: **[12]**

i) Precision & Recall.

ii) False positive & False drop.

iii) Random walk method.

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