

Total No. of Questions : 10]

SEAT No. :

P3139

[Total No. of Pages : 2

[5154]-705

**B.E. (Information Technology)
ADVANCED DATABASES
(2012 Course) (Semester-II)**

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Assume suitable data if necessary.*

Q1) a) Explain fragmentation in distributed databases. **[6]**

b) Write short note on Distributed Query Processing. **[4]**

OR

Q2) a) Explain various system parameters of parallel databases. **[5]**

b) Comparison between object relational and object oriented database. **[5]**

Q3) a) Give the DTD for an XML representation of the following nested relational schema. **[6]**

Emp = (ename, ChildrenSet set of (Children), SkillSet Set of (Skills))

Children = (name, Birthday)

Birthday = (day, month, year)

Skills = (type, Examset set of (Exams))

Exam = (year, city)

Use the DTD and write the following queries in Xqueries format.

- i) Find the names of all employees who have a child who has a birthday in March.
 - ii) Find those employees who took an examination for the skill type "typing" in the city "Dayton".
 - iii) List all skill types in Emp.
- b)** Explain various operations performed by DynamoDB in detail. **[4]**

OR

P.T.O.

- Q4)** a) What is Cassandra Query Language? Explain in detail. [5]
 b) What does column based Key-Value mean when talking about Cassandra vs DynamoDB? [5]
- Q5)** a) How stream data management system works? Explain its issues and solutions. [8]
 b) What is Graph Mining? Also explain its advantages & applications. [8]
- OR
- Q6)** a) What are the models of social network generation? Explain in detail. [8]
 b) Write a short note on Apache Flume NG. [8]
- Q7)** a) Explain Naive Bayes classification for text categorization with example. [6]
 b) Explain concept of data modeling for web usage mining. [6]
 c) Explain concept of collaborative filtering using KNN. [6]
- OR
- Q8)** a) Explain recommender systems. Which are the problems associated with it? [6]
 b) Describe matrix factorization in detail. [6]
 c) How navigational and sequential patterns are analyzed. [6]
- Q9)** a) Write short note on [8]
 i) Spatial databases.
 ii) Temporal databases.
 b) Explain Query Processing in Deductive database in detail. Explain SQL & Datalog Query Processing. [8]
- OR
- Q10)** a) Explain cloud database in detail. Also explain the advantages and disadvantages of cloud databases. [8]
 b) What is semantics? Explain semantics in deductive database in detail. [8]

