E.G.S.Pillay Engineering College(Autonomous),
Department of MCA
Important Questions from Advanced database

UNIT I

PART A (2 MARKS)

1 Summarize the types of Fragmentation?

2 Assess the reason for designing the multiuser system.

3 List the front end tools of database system.

4 Define centralized database systems.

5 Sketch the general structure of a client–server system.

6 Create Vertical fragmentation for bank database

7 What is the need of checkpoint process

8 Differentiate the parallel systems and distributed systems.

9 Illustrate the parallel database architecture models.

10 Define parallel DBMS

11 Differentiate Inter and Intra operation Parallelism.

12 Describe the shared-nothing system?

13 Define distributed DBMS.

14 Show the different s between Homogeneous and Heterogeneous DDBMS?

15 What is local transaction?

16 Summarize the Implementation Issues in Distributed Databases.

17 Analyze the issues in Serializability.

18 Point out locking protocols used for concurrency control in distributed databases.

19 Generalize the reason using Snapshot logs.

20 Give the three basic data-partitioning strategies followed in I/O parallelism.

PART B

Discuss in details about the different Database System Architectures design

Explain the Functions and Architecture of a DDBMS.

With proper illustration explain in details about the Parallel Databases

Explain how I/O parallelism is attained in a parallel database environment

Explain in details about the Distributed Data Storage

Explain in detail about the Three Tier Client Server Architecture with proper illustrations

UNIT II

PART A (2 MARKS)

1 Mention the characteristics of objects?

2 Classify the different types of Persistence of Objects

3 Generalize the need of creating the object identity.

4 What are the goals of OODB

5 Classify the merit of Collection objects over built in data types.

6 Contrast Repeated Inheritance with Selective Inheritance.

7 Give the Features Supported By Object-Relational Data Model.

8 What are the object database standards?

9 Classify the object constructor, destructor and object modifier?

10 Distinguish the Inheritance, Generalization and Specialization?

11 Analyze the reason for using Complex Data Types.

12 Relate how dictionary constructor applied for data access

13 What are the major components of ODMG architecture for an OODBMS?

14 List the features which are supported by ODMG?

15 Compare the OODM with relational data model.

16 What is meant by Interface Repository?

17 What is the use of persistent programming language?

18 Predict the Differentiate among ODL and OQL.

19 Compose the employee class by using Object-Oriented programming language

20 Point out the object relational features available in oracle?

PART B

Explain Object oriented Concepts in database and storing objects in Relational Database.

Differentiate the following with respect to object oriented data model.

i. Classes, subclasses and super classes
ii. Regular inheritance, multi valued and selective inheritance

Describe the following

i. Object Query Language (OQL)
ii. Persistence Schemes OODBMS

Explain in detail about the Issues in OODBMS

Discuss the basic built in interfaces of the ODMG model

Describe briefly about Structured and unstructured complex object

UNIT III

PART A (2 MARKS)

1 What are the differences between structured, semi structured, and unstructured data?

2 Contrast the data-centric and document-centric XML documents?

3 List some of the important attributes used in specifying elements in XML schema.

4 Distinguish the XML schema and XML DTD.

5 Illustrate the diagram of JDBC connectivity

6 Classify the types of data warehouse?

7 Generalize the goal of data warehouse?

8 Demonstrate the example of X-Query and its uses?

9 Summarize rules of valid or well formed XML.

10 Point out the XML Query languages and tools.

11 Give an example of XPath to get the data from XML documents.

12 Order the different phase of knowledge Discovery

13 Summarize the applications of data warehouse.

14 Name the layers of 3-tier client server architecture and give its functions,

15 Assess the requirements for database web interface

16 Create an sample XML document for student database

17 What is the multidimensional data model? And associate How it is used in data warehousing?

18 What is Web crawlers

19 What are the different approaches to data mining problems

20 What is regression?

PART B

Explain in detail about the XML documents and create the sample XML database

Discuss in details about the different types of Querying and Transformation languages and tools.

Give details about approaches used to store XML documents in database.

Explain in details about the JDBC with neat illustration.

Explain in details about the process of Information Retrieval

Describe in detail about the components of a Data warehouse.

UNIT IV

PART A (2 MARKS)

1 Define mobile computing.

2 What is the need for location dependent queries?

3 Differentiate 2.5G and 3G cellular network system

4 Define mobile databases?

5 Assess the issues in distributed data management.

6 Examine the need of handoff operation in mobile network.

7 Describe the WAP? And List out its application.

8 Compare WML and XML markup language.

9 Differentiate the shared lock and exclusive lock modes.

10 Analyze the challenges in mobility client data management.

11 Create a sample WML markup and describe its syntax.

12 How the node failure and timeout actions are performed in commit protocols?

13 Generalize the need to maintaining consistency in mobile application data management?

14 What is the use of verion vector scheme?

15 Show the lock Compatibility matrix for multiple-granularity locking protocol

16 Differentiate the hard handoff and soft handoff operations.

17 Illustrate the Wait-for graph method for detecting deadlock.

18 Define two phase locking protocol.

19 Predict the problems on using lock protocols.

20 Describe the use of concurrency control mechanism?

PART B

How the location and Handoff management can be performed in mobile databases?

Explain the Effect of Mobility on Data Management

Write detailed notes on Concurrency control in mobile database.

Describe the following aspects mobile databases in detail.

(i) Mobile Computing
(ii) Routing and Query Processing
(iii) Broadcasting data

(iv) Disconnectivity and consistency.

Explain in details about the Timestamp-Based Protocols with proper illustration.

Generalize the available methods of Deadlock Detection and Recovery

UNIT V

PART A (2 MARKS)

1 Give any three potential applications for Active database.

2 Show the use of active rules.

3 Point out the components of a rule in ECA model?

4 Contrast the deactivated rules and active command?

5 What is row- level trigger and statement- level trigger?

6 Give any two Specifications of Deductive database.

7 Discriminate prolog and datalog

8 Identify the node structure of the Point Quadtrees.

9 What is knowledge base management system (KBMS)?

10 Summarize the use of range query.

11 Define image database.

12 Formulate the query to find all image/video objects containing Big Spender wearing a purple suit this can be expressed as the SMDSSQL query

13 Describe Polysemy problem in text database.

14 How will you create an active rules

15 Classify the types of query available in MM-DBMS.

16 Point out the four steps used in LSI.

17 Differentiate object retrievals method over segment retrieval for querying video data.

18 Demonstrate any four video functions with proper syntax.

19 Name the two indexing methods used in video database.

20 List the features associated with the audio signal

PART B