

Scheme- I

Sample Question Paper

Program Name : Computer Engineering Program Group
Program Code : CO/CM/CW
Semester : Fifth
Course Title : Advanced Database Management System
Marks : 70

22521

Time: 3 Hrs.

Instructions:

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data if necessary.
- (5) Preferably, write the answers in sequential order.

Q1) Attempt any FIVE of the following.

10 Marks

- a) State the use of concurrency control (any two)
- b) Enlist any four types of join
- c) Write any four benefits of NoSQL
- d) Enlist any four application of Data Mining
- e) Define Big Data.
- f) Give any four characteristics of XML
- g) State the use of Single Purpose Aggregation(any two)

Q2) Attempt any THREE of the following.

12 Marks

- a) Explain Client Server database model with diagram
- b) Compare between Structured and Unstructured data(any four)
- c) explain With example any four operation with MongoDB
- d) Explain structured types and inheritance in SQL.

Q3) Attempt any THREE of the following.

12 Marks

- a) Compare between OLTP vs OLAP
- b) Compare SQL and NoSQL database system(any four points)
- c) Explain steps used to perform data analysis in R programming
- d) Draw and explain Data Warehousing Lifecycle

Q4) Attempt any THREE of the following.

12 Marks

- a) Compare between parallel and Distributed database (any four points)
- b) List and explain any four basic datatype of MongoDB
- c) Describe data synchronization in mobile database.

- d) Explain Oracle Cloud technology.
- e) Describe the features of BI components

Q5) Attempt any TWO of the following.

12 Marks

- a) Write query to execute find() function on Collection: Inventory
 - i) To display all documents in the collection
 - ii) To display all documents where the status equals "D"
 - iii) To display all documents where status equals either "A" or "D":
 - iv) To display all documents where the status equals "A" **and** qty is less than 30:
 - v) To display all documents where the status equals "A" **or** qty is less than 30:
 - vi) To display all documents where the status equals "A" **and** *either* qty is less than 30 *or* item starts with the character p:
- b) Explain array and multiset types in sql with example
- c) Explain object and object identity. Write SQL query for the following table

Class: student
Name
Age
GPA
Subject
Gender
Store
Print
Update

Q6) Attempt any TWO of the following.

12 Marks

- a) Define lock. Explain two phase locking protocol with example
- b) Consider the tables given below:
 - Employees(employee_id,first_name,last_name,job_id,salary,department_d)
 - Departments(department_id,department_name,location_id)
 - i) Find all employees who locate in the location with the id 1700
 - ii) Finds all employees who salaries are greater than the average salary of all employees
- c) Consider following input data for your Map Reduce Program

Welcome to Hadoop Class
 Hadoop is good
 Hadoop is bad

Draw Map Reduce Architecture and explain its phases.

Scheme- I
Sample Test Paper - I

Program Name : Computer Engineering Program Group
Program Code : CO/CM/CW
Semester : Fifth
Course Title : Advanced Database Management System
Marks : 20

22521

Time: 1 Hour

Instructions:

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data if necessary.
- (5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR.

08 Marks

- a) State the use of concurrency control
- b) Give the benefits of Distributed Database.
- c) State the Use of table Inheritance
- d) State the features of R- programming(any two)
- e) Give the difference between Structured vs unstructured data.
- f) State the use of NoSQL database system

Q.2 Attempt any THREE.

12 Marks

- a) Draw and Explain Distributed database system architecture.
- b) Differentiate between Parallel and distributed database system
- c) Write Sql queries using Table inheritance
- d) Write a query using Aggregate methods.

Scheme- I
Sample Test Paper - II

Program Name : Computer Engineering Program Group
Program Code : CO/CM/CW
Semester : Fifth
Course Title : Advanced Database Management System
Marks : 20

22521

Time: 1 Hour

Instructions:

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data if necessary.
- (5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR.

08 Marks

- a) State the Use of mongoDBShell
- b) Differentiate between SQL And NoSQL databases.
- c) State the use of Single Purpose Aggregation
- d) Define Data Mart and Meta Data.
- e) State difference between Data and Big Data (any Two)
- f) State the types of machine Learning Approches.

Q.2 Attempt any THREE.

12 Marks

- a) Explain Basic Operation of MongoDB Shell
- b) Draw and Explain Architecture of Data Warehouse.
- c) Draw and Explain Hadoop Architecture.
- d) Explain Use of Cloudera.