

**ADVANCED  
DATABASE  
MANAGEMENT  
SYSTEM  
(3340701)**

## Unit 1

### Functional dependency and decomposition

- 1) Differentiate: Trivial v/s Nontrivial Dependencies.
- 2) Remove any redundant FD's from following set.
  - i)  $A \rightarrow B, A \rightarrow C, CE \rightarrow H, CG \rightarrow I, B \rightarrow H.$
  - ii)  $XY \rightarrow V, ZW \rightarrow V, VX \rightarrow Y, W \rightarrow Z, Z \rightarrow X.$
  - iii)  $PQ \rightarrow R, PS \rightarrow Q, QS \rightarrow P, PR \rightarrow Q, S \rightarrow R.$
- 3) What is decomposition? Explain its types in detail.
- 4) What is dependency preserving decomposition? Explain in brief.

**Submission Date: 16-01-2017**

## Unit 2

### Normalization

- 1) What is normalization? explain in brief.
- 2) Write short note on: first normal form.(1NF)
- 3) Write short note on: second normal form.(2NF)
- 4) Write short note on: third normal form.(3NF)

**Submission Date: 13-02-2017**

MSP

**Unit 3**  
**Transaction Processing**

- 1) What is transaction? Explain in detail.
- 2) Write a short note on: Transaction states.
- 3) Write a short note on: ACID properties of a transaction.
- 4) What is transaction log? Explain in detail.
- 5) What is concurrency control? Explain various problems of concurrency control in brief.
- 6) Write a short note on degree of consistency.
- 7) What is schedule? Explain it in detail along with different types of schedules.
- 8) What is lock? Explain various types of locks.
- 9) Write a short note on: Time stamp method for concurrency control.
- 10) Write a short note on: Optimistic method for concurrency control.

**Submission Date: 27-02-2017**

## Unit 4

### Advanced SQL

- 1) Explain COMMIT, ROLLBACK and SAVEPOINT.
- 2) Explain GRANT and REVOKE commands with example.
- 3) Differentiate: Implicit locks v/s Explicit locks.
- 4) What is view? Write advantages and types of view.
- 5) What is an Index? Differentiate: Simple Index v/s Composite Index.
- 6) What is sequence? Explain how to create and destroy sequence with example.

**Submission Date: 27-03-2017**

**Unit 5**  
**PL/SQL and Triggers**

- 1) Explain different types of cursor in detail.
- 2) Define triggers. Explain trigger in PL/SQL with example.
- 3) Explain procedure in detail with suitable example.
- 4) Write a PL/SQL block which will give a rise in salary to the employee as per following rules.  
  
If salary+commission<3000 increase salary by 10%.  
  
If salary+commission>=3000 increase salary by RS 500.  
  
If salary+commission is above 7000 increase salary by 12%.
- 5) Define package. Write steps to create package in PL/SQL block.
- 6) Explain anchored data type with example.
- 7) State the meaning of PRAGMA EXCEPTION\_INIT.
- 8) What are the different types of exceptions? Explain all briefly.
- 9) Write a PL/SQL code block to find out the factorial value using procedure and function. Call the procedure and function in main code block.

**Submission Date: 07-04-2017**