GANPAT UNIVERSITY

B. Tech. Semester - IV (Computer Engineering/Information Technology)

Regular Examination   April - June 2015

2CE405/2IT405: Database Management System- II.

Time: 3 Hours]

[Total Marks: 70

Instructions:

1. Figures to the right indicate full marks.
2. Attempt each section in a separate answer book.
3. Be precise and to the point in your answer.

SECTION-I

Q-1 [A] Discuss concurrent execution of transactions with example. List the advantages. [6]

[B] Discuss with example: consistent old & new database state with respect to transaction execution. [6]

OR

Q-1 [A] Discuss simple lock based protocols with shared and exclusive mode lock. [6]

[B] Discuss following trigger types: [6]
    1. Row trigger 2. Statements trigger 3. Before trigger 4. After trigger

Q-2 [A] Explain Strict Two Phase & Rigorous Two Phase locking protocol. [6]

[B] What is R-timestamp & W-timestamp in timestamp based protocol? Discuss with example. [5]

OR

Q-2 [A] Write a Pl/Sql function that returns n right most characters from the string passed as an argument. [5]

[B] Discuss Named & Numbered exception handling in Pl/Sql. [6]

Q-3 [A] Discuss lock conversion: Upgrading & Downgrading with Two phase locking protocol. [6]

[B] Discuss with example: Precedence graph theory. [6]

Q-4 [A] What is buffer block and physical block? Explain data access process between disk and main memory. [6]

[B] Draw and explain transaction-server system architecture [6]

OR

Q-4 [A] What is the purpose of recovery in Database? Explain log based recovery and its different approaches. [6]

[B] Explain following database architectures. [6]
   a) Centralized database systems
   b) Client-Server database systems.

Q-5 [A] List advantages and disadvantages of PL/SQL. [6]

[B] What is a cursor? Explain cursor attributes with example. [5]

OR

Q-5 [A] What is the role of commit protocol? Explain 2-Phase commit protocol. [6]

[B] Explain following terms: [5]
   a) Page shipping versus item shipping
   b) De-escalation
   c) Cache coherency
   d) Loch caching

Q-6 [A] Write a Pl/Sql block that updates SALARY by 10% of employee of a specified Company using parameterized cursor. [4]
Company_Master: (No, Company, Salary).

[B] Explain commit and rollback statement with suitable example. [4]

[C] Write a pl/sql code that accepts emp_no from user. If balance of employee is below Rs. 500, then update its balance by Rs.500, otherwise display current balance. [4]
Employee: (Emp_no , Name ,Balance)

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