

Date: 17/05/2016

Exam No: _____

GANPAT UNIVERSITY
B. TECH SEM- IV(CE/IT) REGULAR EXAMINATION- APRIL-JUNE 2016
2CE403/2IT403: DATABASE MANAGEMENT SYSTEM-II

TIME: 3 HRS

TOTAL MARKS: 60

Instructions:

- (1) This Question paper has two sections. Attempt each section in separate answer book.
- (2) Figures on right indicate marks.
- (3) Be precise and to the point in answering the descriptive questions.

Section-I

- Q.1 [A] Write acronym of ACID. Explain ACID property in detail with suitable example. (5)
- [B] What is the role of query optimizer? Explain how query cost is measure. (5)

OR

- Q.1 [A] Explain view serializability with proper example. (5)
- [B] Write and explain basic steps involved in processing a query. (5)
- Q.2 [A] Explain locking protocol where each transaction issue lock and unlock requests in two phases. (6)
- [B] What do you mean by cascading rollback? Is Cascading rollback good or bad for database system? How can we avoid cascading rollback? (4)

OR

- Q.2 [A] Explain Multiple granularities locking protocol for ensuring serializability. (6)
- [B] Explain recoverable schedule and non-recoverable schedule with proper example. (4)
- Q.3 [A] Define following terms: (4)
- Savepoint
 - Explicit cursor
 - %ISOPEN
 - Raise_application_error
- [B] What is the use of wait for graph? Explain with suitable example. (3)
- [C] Write a PL/SQL code using cursor for loop to display NO, NAME, CITY of first three rows. Use table Empmaster (NO,NAME,CITY). (3)

Section-II

Q.4 [A] Explain following terms in short:

- Stable storage
- Buffer block
- Checkpoint

[B] Explain server system architecture in short.

(4)

OR

Q.4 [A] Explain transaction server process structure with proper diagram.

(6)

[B] What is log based recovery? Explain deferred database modification technique with proper example.

(4)

Q.5 [A] Explain following terms in short:

- Page shipping versus item shipping.
- Data caching
- Global transaction
- Lock caching

(4)

[B] What is the importance of data fragmentation? Discuss various types of data fragmentation.

(6)

OR

Q.5 [A] Discuss how 2PC protocol responds in various types of failures.

(6)

[B] What do you mean by transparency in distributed database? Discuss the various transparencies and its importance in distributed database.

(4)

Q.6 [A] Write a pl/sql code to perform insert, update, delete on table Empmaster (NO, NAME, CITY) during office time only.
*Consider office time is 10 am to 5 pm on Monday to Friday.

(4)

[B] Write a code to create pl/sql based function that is work as simple calculator. Use operator like '+', '-', '*', '/'.

(4)

[C] What is the use of function sqlcode and sqlerrm in pl/sql.

(2)

*** End Of Paper ***