DE-1318

M. Sc. (Sem. I) (Comp. Application) Examination
March / April - 2016
Paper - 102 : Advanced Relational Database Management System

Time : 3 Hours] [Total Marks : 70

Instruction :

Fill up strictly the details of signs on your answer book.

Name of the Examination : M. SC. (SEM. I) (COMP. APPLICATION)
Name of the Subject : P. - 102 : ADVANCED RELATI. DATAB. MANA. SYS.
Subject Code No. : 1 3 1 8 Section No. (1, 2, ..., ) : Nil

1 Answer in Short.
1. What is Skew in Bucket overflow condition?
2. What do you mean by strict two phase locking?
3. What is the difference between SQL Inner Join and Outer Join?
4. What is multi-version time ordering scheme?
5. Explain Producer Driven Pipelining in brief.
6. Explain Halloween Problem.
7. Explain Lost update problem in brief.

2 Do as Directed. (Any Two) [14]
(a) Explain B+ Tree Index Files along with its Structure and example. Also discuss how Queries are processed on B+ Trees.

(b) Explain Sparse Index and Dense Index with example and also discuss multilevel indices.

(c) Write a short note on Indexed Nested loop Join.

3 Do as Directed (Any Two) [14]
(a) Discuss Time stamp based protocols in detail.

(b) Discuss the Phantom phenomenon in detail along with Index locking protocol.

(c) Discuss view serializability in detail with example.

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4 Do as directed. (Any Two)
   (a) What is deadlock? Discuss how deadlocks are handled, prevented, detected and recovered.
   (b) Explain in detail Hash Join along with Hybrid Hash Join in detail.
   (c) Discuss Pipeline evaluation in detail.

5 Do As directed
   (a) What is clustering index? What is primary index? How many clustering index can be built on a file and how many unclustering index can be built?

   -- OR --

   (a) Explain Log based recovery with example.
   (b) Explain immediate Database Modification in Recovery of system in detail.