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SB-4313

MCA (Sem. II) Examination

March / April – 2011

Paper-203 : R.D.B.M.S.

Time : **3** Hours] [Total Marks : **70**

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **MCA (Sem. 2)**

Name of the Subject :

☛ **P-203 : RDBMS**

☛ Subject Code No. : **4 3 1 3** ☛ Section No. (1, 2,.....) : **Nil**

Seat No. :

Student's Signature

1 Answer the following : (any seven) **14**

(i) What is MTTF ?

(ii) Define Dense and sparse indices ?

(iii) What is the difference between primary indices and secondary indices ?

(iv) What is the difference between coarse granularity parallelism and fine granularity parallelism ?

(v) Define Deadlock and Starvation.

(vi) What is Thomas Write Rule ?

(vii) What is checkpoint ?

(viii) What is WAL (Write ahead logging) ?

(ix) What is Recoverable schedules ?

(x) What is cache coherency problem ?

2 Attempt any two : **14**

(a) Write short note on RAID.

(b) Explain how records in B+ Tree index file are inserted and deleted using example.

(c) Define Speedup and Scaleup for parallel systems. Also list and explain different types of scaleup.

3 Attempt any two : **14**

(a) Explain redo and undo operation with respect to immediate database modification approach of log based recovery scheme.

(b) Write short note on Grant and Revoke.

(c) Explain Nested loop join. How block access can be reduced in case of Block nested loop join ?

4 Attempt any two : **14**

(a) What is the difference between serial schedules and serializable schedule ? Explain view serializability with proper example.

(b) Explain Two Phase locking protocol.

(c) Explain basic steps in query processing.

5 Answer the following : **14**

(a) List and explain different partitioning techniques of I/O parallelism. State in which types of queries each partitioning technique is suitable. **7**

(b) Explain data transparency of distributed database. **4**

(c) What is data fragmentation ? **3**