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[4966]-3002

M.C.A (Commerce Faculty) (Third Semester) EXAMINATION, 2016

302 : ADVANCED DATABASE MANAGEMENT SYSTEM

(2013 PATTERN)

Time : Three Hours

Maximum Marks : 50

N.B. :— (i) Neat diagrams must be drawn whenever necessary.

(ii) Figures to the right side indicate full marks.

1. Attempt any seven : [7×2=14]

(a) Differentiate between object identity and foreign key .

(b) Define :

(i) Spatial data

(ii) Point.

(c) List steps of query processing.

(d) What is I/O parallelism ?

(e) What is vertical fragmentation ?

(f) Define :

(i) Boolean query

(ii) Ranked query.

(g) What is homogenous database system ?

(h) Define vector space model.

P.T.O.

2. Attempt any *three* : [3×4=12]
- (a) Differentiate between OODBMS and ORDBMS.
 - (b) Write a note on Hash join.
 - (c) Which are different parallel database system architecture ?
 - (d) What is c/s architecture ? Differentiate between thin and thick client ?
3. Attempt any *three* : [3×4=12]
- (a) What are different applications of spatial data ?
 - (b) What are responsibilities of transaction manager and transaction co-ordinator ?
 - (c) Write a note on R-trees.
 - (d) Write a note on object.
4. Attempt any *three* : [4×3=12]
- (a) What is replication ? Explain advantages and disadvantages of replication ?
 - (b) Write a note on HITS algorithm.
 - (c) Write note on majority based approach.
 - (d) Consider the following schema :
Machine (Mno, Mname, Mcost)
Perform horizontal fragmentation of machine relation using the following predicates :
- $P_1 : \sigma_{MCOST < 2000}$
- $P_2 : \sigma_{MCOST \geq 2000 \text{ and } MCOST < 5000}$
- $P_3 : \sigma_{MCOST \geq 5000}$