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**B.E. (Information Technology) (Semester - VII) Examination,
November - 2017**

ADVANCED DATABASE SYSTEMS (Revised) (New)

Sub. Code : 67622

Day and Date : Wednesday, 15 - 11 - 2017

Total Marks : 100

Time : 02.30 p.m. to 05.30 p.m.

- Instructions :**
- 1) Attempt any three questions from questions 1,2,3,4.
 - 2) Attempt any three questions from questions 5,6,7,8.

Q1) a) With the help of diagram, explain the steps involved in processing a query. [8]

b) Explain in detail with example, the following join operations. [8]

- i) Block Nested - Loop join
- ii) Indexed Nested - Loop join

Q2) a) With the help of example, explain database design for RDBMS and ORDBMS. [8]

b) Explain structured data types and operations on structured data. [8]

Q3) a) Explain in detail, the architectures for distributed DBMS. [8]

b) Define speedup in parallel databases. Explain how the join operation can be parallelized in parallel databases. [8]

Q4) Write short notes on (any three)

[3 × 6 = 18]

- a) Join size estimation
- b) OID & Notions of equality
- c) Distributed deadlock detection
- d) Semijoin and bloomjoin in distributed databases

P.T.O.

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Q5) a) What is view materialization? List the issues in view materialization. When should we synchronize view? [8]

b) Define cluster. Explain BIRCH algorithm in detail. [8]

Q6) a) Describe roll-up, drill-down, pivoting, slicing and dicing operations and illustrate them using example. [8]

b) Explain TP-monitor components and application coordination using TP-monitor. [8]

Q7) a) Explain main memory databases and real time transaction systems. [8]

b) What is Web structure mining? Explain page Rank, HITS algorithm. [8]

Q8) Write short notes on (any three)

[3 × 6 = 18]

a) Long-duration transactions

b) K-means algorithm

c) Views and decision support

d) Inverted indexes for text search

