Third Year B.C.A (Semester - I) Examination
Paper - 15BCA304
Advanced Database Management System

Time : Three hours]   [Full Marks - 60

N.B. :   i) All questions carry equal marks
    ii) Due credit will be given to neatness & adequate dimensions.
    iii) Assume suitable data wherever necessary.
    iv) Illustrate your answer necessary with the help of neat skectches.
    v) Use Blue/Black ink/refill only for writing the answer book.

Q.1   Select correct alternative and rewrite the following statements.   5
    a) Key to represent relationship between table is called.
        i) Primary Key
        ii) Secondary Key
        iii) Foreign Key
        iv) None of the above
    b) _____ help to solve concurrency problem.
        i) locking
        ii) transcation monitor
        iii) transcation seriazibility
        iv) two phase commit
    c) An autonomous homogenous environment is which of the following.
        i) The same DBMS at each node & each DBMS work independently
        ii) The same DBMS at each node & a central DBMS coordinates database access.

1

iii) A different DBMS is at each node & a central DBMS coordinates database access

iv) A different DBMS is at each node & a central DBMS coordinates database access.

d) ORDBMS stands for
   i) Object redable DBMS
   ii) Object relational DBMS
   iii) Optional relational DBMS
   iv) None of the above

e) The data is stored, retrieved & update in,
   i) OLAP   ii) SMTP
   ii) OLTP   iv) FTP

Q.2   a) Explain database file organization concept in detail.   6
     b) Explain :-   5
       i) Database Tuning   ii) DBMS Benchmarking

OR

Q.3   a) What is Normalization? Explain with example.   6
     b) Explain Physical database design concept in detail.   5

Q.4   a) What is Concurrency? How it is controlled explain.   6
     b) What is Log? Explain with example in detail.   5

OR

Q.5   a) What is Serialziability? Explain in detail.   6
     b) Explain in detail time stamp ordering protocol.   5

Q.6   a) Explain distributed database with their architecture.   6
     b) Explain in detail with suitable example.   5
       i) Replication
       ii) Fragmentation

OR

Q.7   a) What is query processing in distributed DBMS? Explain in detail.   6
     b) State and explain the term scale-up and speed-up.   5

Q.8   a) What is OODBMS state and explain it's advantages & disadvantages.   6
     b) Explain in brief :-   5
       i) Inheritance
       ii) Query optimization

OR

Q.9   a) Explain any six characteristics of OORDBMS.   6
     b) Explain in brief :-   5
       i) Binding Methods
       ii) Polymorphism

Q.10   a) What is Datawarehousing? Explain in detail.   6
     b) What is KDD? Explain steps involved in KDD.   5

OR

Q.11   a) What is datamining? State and explain it's application.   6
     b) Explain in brief :-   5
       i) DSS
       ii) OLTP

****