

**(OLD COURSE)****Q.P. Code : 3782****(3 Hours)****[Total Marks : 100]**

Question No 1 is compulsory.

Attempt any 4 questions from remaining questions.

Make suitable assumptions if required

Q.1

a) Explain with suitable example: Aggregation, Specialisation & Generalisation in EER diagram. (10)

b) In SQL3 how type inheritance & table inheritance are implemented? Explain with suitable example. (10)

Q.2

a) Explain data fragmentation, replication and allocation technique for distributed database design. (10)

b) Give an overview of 3-tier client server architecture. (10)

Q.3

a) Explain different architectures of parallel database. (10)

b) State comparison of RDBMS, OODBMS & ORDBMS. (10)

Q.4

a) Explain macro life cycle in database design methodology. (10)

b) What is heuristic rule in query optimization? Explain transformation rules. (10)

Q.5

a) Explain different JOINS such as EQUIJOIN, NATURAL JOIN, LEFT & RIGHT OUTER JOIN with suitable example. (10)

b) Explain query processing in distributed database. (10)

Q.6

a) What is data transparency? Explain type of transparencies distributed database should achieve. (10)

b) What is valid & well formed XML document? With example explain what is XML Schema file? (10)

Q.7 Write note on following. (20)

a) Persistent Object

b) Temporal database

c) Geographical Information Systems

d) Mobile database