

Seat No.	
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B.E. (CSE) (Part-IV) (Semester-VII) (Revised)

Examination, November - 2017

ADVANCED DATABASE SYSTEMS

Sub. Code : 67543

Day and Date : Wednesday, 15-11-2017

Total Marks : 100

Time : 2.30 p.m. to 5.30 p.m.

- Instructions :**
- 1) Attempt any three questions from each section.
 - 2) Figures to the right indicate full marks.
 - 3) Assume suitable data wherever necessary.

SECTION-I

- Q1) a)** What do you mean by replication and fragmentation w.r.t. distributed database? Briefly explain the advantages and disadvantages to replication. [8]
- b)** What are transaction-server systems? For data server systems, explain the following [8]
- i) Locking
 - ii) Data caching
 - iii) Lock caching
- Q2) a)** What is an Object Identity? Explain the system-generated OID and the immutability Property of an object. [8]
- b)** What is Persistent object? Explain the approaches to make the Object Persistent? [8]
- Q3) a)** State some of the object database features that have been included in SQL. Also give an example of UDTs in SQL to create complex structured object. [8]
- b)** With the help of an appropriate figure of the database life cycle, explain in detail database initial study phase. [8]

P.T.O.

Q4) Write short notes on any three:

- a) 2-phase commit
- b) ODL
- c) Persistence
- d) top-down versus bottom-up design

SECTION-II

Q5) a) Explain the intuition behind the two rules in the Bell-LaPadula model for mandatory access control. [4]

b) Give an example of how covert channels can be used to defeat the Bell-LaPadula model. [4]

c) Explain the statistical database security. [8]

Q6) a) Explain document type definition. Describe a DTD with suitable example for an XML. [8]

b) Write the applications of XML. [4]

c) What is Xquery? Explain FLOWR expression with example? [4]

Q7) a) What is data warehouse? What is the difference between data warehouse and operational database system? [6]

b) Explain Following [4]

i) Data cube

ii) OLAP

c) With neat schematic explain business intelligence architectural components? [6]

Q8) Write a short note on (any three)

[18]

a) Polyinstantiation

b) XML schema

c) Classification algorithm

d) Grant and Revoke with example.

