

M.Tech. Computer Science & Engineering CBCS Pattern Semester-II  
**PCSS22 - Advanced Database**

P. Pages : 1

Time : Three Hours



**GUG/W/23/10993**

Max. Marks : 70

- Notes :
1. Solve **any five**.
  2. All questions carry equal marks.
  3. Due credit will be given to neatness and adequate dimensions.
  4. Assume suitable data wherever necessary.
  5. Diagrams and Chemical equation should be given wherever necessary.
  6. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) What is Dynamic SQL? Explain with suitable neat diagram why we need dynamic SQL? **8**  
b) Explain **6**
  - i) ODBC
  - ii) JDBC
2. a) Explain Database Development Life Cycle with neat labelled diagram. **8**  
b) Explain concept of Embedded SQL. Explain Database systems that supports Embedded SQL. **6**
3. a) Explain Web data management with XML. **8**  
b) Explain ROLAP and MOLAP Architecture. **6**
4. a) Explain the concept of Data Mining and OLAP. Also Differentiate Data mining and OLAP. **8**  
b) Explain object data model. **6**
5. a) What is TPM? Explain TPM Architecture with neat labelled diagram. **8**  
b) Explain Heuristic Optimization in DBMS. What are optimization problems? **6**
6. a) Explain measures of Query cost in DBMS. **6**  
b) Explain **8**
  - i) Transaction
  - ii) Transaction States
  - iii) Transaction Operation
  - iv) Desirable properties of Transaction
7. a) Explain Semantic commutativity and object commutativity. **6**  
b) Explain schedules in DBMS. Explain serial and non-serial schedules. **8**
8. a) What is Encryption in DBMS? Explain algorithm for encryption process. **8**  
b) Explain serializability in DBMS. Also explain types of serializability. **6**

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