

END TERM EXAMINATION**SEVENTH SEMESTER [B.TECH] FEBRUARY 2023****Paper Code: ETIT-427****Subject: Advanced Database Administration****Time: 3 Hours****Maximum Marks: 75**

Note: Attempt five questions in all including Q. No.1 which is compulsory. Select one question from each unit. Assume missing data.

Q1 Attempt all questions:- (2.5x10=25)

- Discuss the four data allocation strategies.
- Write a note on mobile databases.
- Briefly explain data mining.
- Explain the role of Query Optimizer in Oracle.
- Describe the process of ETL for a data warehouse.
- Discuss, how Oracle manages database security?
- What are assertions? Explain with an example.
- How can you protect your database from statistical query attacks? Explain.
- List the features of semantics database.
- What are challenges designing multimedia databases? Discuss.

UNIT-I

- Q2** (a) Discuss the main characteristics of the database approach and how it differs from traditional file system. (8)
 (b) What is data integrity? Explain the types of integrity constraints. (4.5)
- Q3** (a) What are semantic databases? List the features of semantic databases. Explain the process of searching the knowledge in these database. (7.5)
 (b) Compare and contrast the distributed DBMS environment with the centralized DBMS environment. (5)

UNIT-II

- Q4** (a) What are cursors, stored procedures and triggers? Give SQL Syntax for each and discuss the utility aspect of each. (7.5)
 (b) Explain Join- Dependency with the help of an example. With which normal form is it associated? (5)
- Q5** (a) What is "tuning a database"? What are the goals of tuning in relational database system? Why is Query tuning required? (6.5)
 (b) Explain data fragmentation in DDBMS with the help of an examples. (6)

UNIT-III

- Q6** (a) Explain the algorithm and cost calculation for simple Hash Join. (6.5)
 (b) Write short notes on: (a) Vendor-Specific Security (b) Multilevel Security. (6)
- Q7** (a) What is a data warehouse? Describe the process of ETL for a data warehouse. (6)
 (b) What are data marts? Briefly discuss the method of creating the data marts. (6.5)

UNIT-IV

- Q8** (a) How is the check pointing information used in the recovery operation following a system crash in DBMS. Explain. (6.5)
 (b) What are advantages of normalized relations over the un-normalized relations? (6)
- Q9** (a) What do you understand by timestamp based protocol. Discuss mutli- version scheme also. (6.5)
 (b) Write a short notes on : (a) Serializability (b) Recoverability (c) Data Pump. (6)
