

19. (a) Give a short note on hierarchical data model with an example.

Or

- (b) What are the structured data and unstructured data in XML?
20. (a) Write the difference between packing and unpacking relations.

Or

- (b) Illustrate the applications of multimedia database.

PART C — ($3 \times 10 = 30$)

Answer any THREE questions.

21. Distinguish between Interquery Parallelism and Intraquery Parallelism.
22. Describe about the commit protocols in distributed databases.
23. Elucidate recursive query processing.
24. Explain in detail about XML schema.
25. Write a note on multimedia database queries.

S.No. 6788

P 22 ITCC 12

(For candidates admitted from 2022–2023 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

Information Technology

ADVANCED DATABASE MANAGEMENT SYSTEMS

Time : Three hours

Maximum : 75 marks

PART A — (20 marks)

Answer ALL questions.

- I. (A) Choose the correct answer. ($5 \times 1 = 5$)
1. What is DBMS?
- (a) DBMS is a collection of queries
 - (b) DBMS is a high-level language
 - (c) DBMS is a programming language
 - (d) DBMS stores, modifies and retrieves data
2. Which forms have a relation that contains information about a single entity?
- (a) 4NF
 - (b) 2NF
 - (c) 5NF
 - (d) 3NF

3. SPATIAL indexes cannot be created on NOT NULL spatial columns.
 - (a) True
 - (b) False
 - (c) Moderate
 - (d) None of the above
4. The relationship between DEPARTMENT and EMPLOYEE is a _____.
 - (a) One to one relationship
 - (b) One to many relationship
 - (c) Many to many relationship
 - (d) Many to one relationship
5. Domain integrity also called _____.
 - (a) Attribute
 - (b) Row
 - (c) Data
 - (d) Complex
- (B) Fill in the blanks. (5 × 1 = 5)
 6. _____ key is an attribute that serves as the primary key of another relation.
 7. _____ is required to process a query in a distributed database.
 8. In _____ formats data is stored in the database management system.
 9. In a _____ schema, data organized into a structure that appears as a tree.
 10. _____ is the subset of SQL commands used to manipulate Oracle Structures, including tables

- II. Answer ALL the questions. (5 × 2 = 10)
 11. Write a note on relationship types.
 12. Define inheritance.
 13. List out the techniques of spatial database query.
 14. Mention the three main types of XML document.
 15. What is Integrity constraints?

PART B — (5 × 5 = 25)

Answer ALL the questions, choosing either (a) or (b).

16. (a) List out the types of relationship in database systems.

Or

 (b) Define normalization and Explain about 1NF, 2NF and 3NF.
17. (a) Briefly discuss about distributed data storage with a technique of data replication.

Or

 (b) Elucidate object and reference types.
18. (a) Mention the characteristics of spatial database.

Or

 (b) Explain propositional calculus with an example.