

**B.E / B.TECH DEGREE EXAMINATIONS: MAY/JUNE 2013**

Fourth Semester

**ITY103: DATABASE MANAGEMENT SYSTEMS**

(Common to CSE / IT)

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-  
PART A (10 x 1 = 10 Marks)**

1. Naïve users are also called as
  - a) Parametric end users
  - b) Sophisticated end users
  - c) Stand alone users
  - d) Casual end users
2. Which files are used for the purpose of querying and updates?
  - a) Auxiliary files
  - b) Primary files
  - c) Magnetic files
  - d) None of the above
3. A Relation is defined as a set of
  - a) Attributes
  - b) Tuples
  - c) Columns
  - d) Domain
4. Which normal form is based on the concept of Transitive Dependency?
  - a) 1NF
  - b) 2NF
  - c) 3NF
  - d) BCNF
5. A file is a sequence of
  - a) Fields
  - b) Records
  - c) Sets
  - d) Blocks
6. Hashing for disk file is called
  - a) External Hashing
  - b) Internal Hashing
  - c) Static Hashing
  - d) Dynamic Hashing
7. \_\_\_\_signals the successful end of a transaction.
  - a) Begin Transaction
  - b) End Transaction
  - c) Commit Transaction
  - d) Read or Write Transaction
8. \_\_\_\_database system provides an unique identity to identify an object.
  - a) Distributed
  - b) Object Relational
  - c) Object Oriented
  - d) Hetrogenous
9. WEB stands for
  - a) Work Element Block
  - b) Work Enhancement Browser
  - c) Work Element Browser
  - d) Work Enhancement Block

10. Which process defines a set of subclasses of an entity type?
- a) Specialization
  - b) Generalization
  - c) Association
  - d) Classification

**PART B (10 x 2 = 20 Marks)**

- 11. Define Database.
- 12. Specify the functions of DBA.
- 13. Write the syntax for creating a View.
- 14. Mention about BCNF.
- 15. Define Buffer.
- 16. What do you mean by Query Processing?
- 17. List out the desirable properties of a Transaction.
- 18. What is the purpose of shadow paging?
- 19. What is the need of Complex Data Type?
- 20. Write about Commit Protocols.

**PART C (5 x 14 = 70 Marks)**

- 21. a) (i) Describe about the disadvantages of File Systems. (7)  
(ii) Explain about the Database System Architecture. (7)  

**(OR)**

b) (i) Write a note on Transaction Management. (7)  
(ii) Explain about the Entity Relationship Model. (7)
- 22. a) (i) Describe about the operations involved in Relational Calculus. (7)  
(ii) Explain about the DDL and DML commands (7)  

**(OR)**

b) (i) Describe about Integrity Constraints. (7)  
(ii) Elaborate about the Set Operations in SQL. (7)
- 23. a) (i) Distinguish between Static Hashing and Dynamic Hashing. (7)  
(ii) Explain the working behavior of Magnetic Tape. (7)  

**(OR)**

b) (i) Draw the diagrammatic representation of a B Tree and B+ Tree. (7)  
(ii) Write short notes on Single level ordered index and multilevel ordered index. (7)

24. a) (i) Define a Transaction. Explain about the ACID properties of a Transaction. (7)  
(ii) Describe about Conflict Serializability and View Serializability. (7)

**(OR)**

- b) (i) How will you identify a Deadlock? What are all the steps to recover from Deadlock? (7)  
(ii) Explain about Timestamp Based Protocols. (7)

25. a) (i) Distinguish: Structured Types and Complex Types in SQL. (7)  
(ii) Describe about Object Oriented Database. (7)

**(OR)**

- b) (i) Explain about Distributed Data Storage. (7)  
(ii) Compare and contrast the features of Homogenous and Heterogenous Database. (7)

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