

Roll No.

Total Pages : 3

301502

December, 2019

**B.Tech. (CE/CSE/IT) - V SEMESTER
DATABASE MANAGEMENT SYSTEMS (PCC-CS-501)**

Time : 3 Hours]

[Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*
2. *Answer any four questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART - A

1. (a) Explain briefly about Armstrong's axiom. (1.5)
(b) What is hashing? (1.5)
(c) Explain briefly the usage of Intrusion Detection Mechanism. (1.5)
(d) Briefly explain any *one* advantage of Distributed Databases. (1.5)

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- (e) Write a short note on Candidate Keys. (1.5)
- (f) What do you mean by query optimization in DDBMS? (1.5)
- (g) Differentiate between strong and weak entity. (1.5)
- (h) Write a short note on shadow paging. (1.5)
- (i) Briefly explain the usage of commercial DBMS. (1.5)
- (j) What is the role of Data manipulation language (DML)? (1.5)

PART - B

- 2. (a) What are the different levels of data independence? Explain. (10)
- (b) Explain the difference between specialization and generalization. (5)

- 3. (a) Explain Bell-la padula model for database security. (5)
- (b) What is transaction? Explain the ACID properties for transaction. (10)

- 4. Explain Multivalued dependency in database with suitable examples. (15)

- 5. (a) What is Decomposition? State and explain characteristics of decomposition. (5)
 - (b) Explain the difference between Objected Oriented and Object relational databases. (10)

 - 6. (a) What is tree in DBMS? Why do we need B-trees? Explain briefly with example. (10)
 - (b) What is Query Optimization in DBMS, briefly explain Cost based Optimization technique. (5)

 - 7. Explain and give difference between the different methods of access management MAC, DAC and RBAC? (15)
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