

30/11/2024 IT SEM-III C SCHEME DMS QP CODE: 10067682

Duration: 3 Hours

[Max Marks: 80]

- N.B. : (1) Question No 1 is Compulsory.
(2) Attempt any three questions out of the remaining five.
(3) All questions carry equal marks.
(4) Assume suitable data, if required and state it clearly.

- 1 a Explain different keys in DBMS. [05]
b Strong Vs Weak Entity. [05]
c Explain the aggregate functions in SQL with examples. [05]
d Discuss the role of DBA. [05]
- 2 a Design an ER diagram for a Bank Database System. [10]
b What is a deadlock? Explain the causes of deadlocks? Explain the deadlock prevention methods used in DBMS. [10]
- 3 a Describe the overall architecture of DBMS with a suitable diagram. [10]
b What is Normalization? Explain 1NF, 2NF and 3 NF with examples. [10]
- 4 a Explain different relational algebra operators with examples. [10]
b Explain types of integrity constraints with examples. [10]
- 5 a Explain the ACID properties of transactions. [10]
b Explain database programming with JDBC. [10]
- 6 Write short note on:
a Trigger in SQL [05]
b Log based recovery [05]
c Conflict Serializability [05]
d Specialization and Generalization in EER [05]