

2019

Time : 3 hours

Full Marks : 50

Candidates are required to give their answers in their own words as far as practicable.

The questions are of equal value.

*Answer any **five** questions.*

1. (a) Define Database Management System.
(b) What is DBA ? What are the responsibilities of DBA ?
2. What is data model ? List the types of data model used and explain it ?
3. (a) What are the disadvantage of file processing system ?
(b) What are the advantage of using a DBMS ?
4. (a) Explain the levels of data abstraction.

- (b) Define the term schema. List all schema's and explain it.
5. (a) What are the ACID Properties ?
(b) What are the two pitfalls (problem) of lock bared protocols ?
6. What is normalization ? Define, in detail, using 1NF, 2NF, 3NF and BCNF with example.
7. (a) What is functional dependency in DBMS ?
(b) What is attribute closure in DBMS ?
8. (a) What is data dictionary ? Define database.
(b) Construct an Er-diagram for Hotel Management System.
9. What are the conditions for deadlock in dbms ? How we can recover it and protect it, explain in detail.
10. (a) What is the use of lockbased protocol ?
(b) Define conflict and serializability.

