

Bachelor Level / Second Year/ Forth Semester/ Science
Computer Science and Information Technology (CSC 253)
(Database Management System)
(VERY OLD COURSE)

Full Marks: 60
Pass Marks: 24
Time: 3 hours.

Candidates are required to give their answers in their own words as far as practicable.
All figures in the margin indicate full marks.

Attempt ALL questions

1. Answer the following questions in short: [5 x 2 = 10]
 - a) Derived attribute
 - b) Candidate key
 - c) Functional Dependency
 - d) Data Abstraction
 - e) SQL
2. a) Draw an ER diagram for online vacation management system where the users provide the details of the places they want to visit along with the number of visitors. They also provide their food preferences. The system provides list of probable alternatives based on the requirement. The user can book and pay online. [7]

b) Differentiate between database manager, database administrator, and database users. [3]
3. a) Explain 1 NF, 2 NF, and 3 NF. [6]

b) Explain the applicability of triggers with examples. [4]
4. a) What do you understand by referential integrity constraints? Explain. [4]

b) Explain different types of JOIN operations. [6]
5. a) Differentiate between conflict and view serializability? [5]

b) Explain any one technique for concurrency control. [5]
6. a) Explain about shadow paging. [5]

b) List the advantages and disadvantages of tuple calculus. [5]