



School of Computer Science and Engineering

Winter Semester 2024-2025

Continuous Assessment Test – 1

SLOT – B2

Programme Name & Branch : B.Tech -CSE with Business Systems

Course Name & code: CBS1007 Database Systems

Faculty Name (s): K. Govinda, M Anbarasi

Exam Duration: 90 Min.

Marks: 5 x 10=50 ^{u²}

1. Consider you are working as a DB analyst in IBM, explain why businesses are moving towards database system for handling large amount of data compared to file system with proper justification.
2. Consider that you are working as a Data Analyst in Data Corporation. Amazon CEO approached you to manage business data, suggest the physical data models to handle business data. Compare and contrast the features of physical data model with neat sketch and suggest the suitable model for amazon business.
3. If you are working as a business analyst in Teradata Corporation, company hired new team for database division. Explain the overall database system structure with neat sketch.
4. Construct an E-R diagram for online shopping service provider amazon by considering at least eight entities. Document all assumptions that you make about the mapping constraints. List the entities, relationships and attributes and Convert E-R diagram into tables.
5. You are given the following Schema:
Course(CourseId, Title, Dept_Name, Credit)
Instructor(ID, Name, Dept_Name, Salary)
Department(Dept_Name, Building, Budget)
Prereq(CourseId, PrereqId)
teaches(ID, course id, sec id, semester, year)

Based on the schemas, write SQL expressions or Queries for the following questions.

- a. Find the names of all instructors in the Computer Science department who have salary greater than \$70,000.
- b. Retrieve the details of all instructors, along with their department names.
- c. Find the names of instructors and department with salary amounts between \$90,000 and \$100,000.
- d. Find the names of all instructors, course id who handled course in 2021, 2022, 2023 and 2024.