**UNIVERSITY COLLEGE OF ENGINEERING (BIT CAMPUS), TIRUCHIRAPPALLI-620 024**

**First Internal Assessment Test**

**Department of CSE / IT**

**Subject Code / Name:** CS8492 / Database Management Systems

**Date Duration :** 01.02.2019 & 1.30Hrs **Marks: 50**

**Degree/Branch:** B.TECH/IT Sec’B’ **Year / Sem:** II / IV

**PART-A**

**Answer *All* Questions 7 x 2 = 14**

1. Who is a DBA? What are the responsibilities of a DBA?
2. What is a data model? List the types of data model used.
3. What are the disadvantages of file processing system?
4. Define instance and schema.
5. What is relationship? Give examples.
6. Define Super Key, Candidate Key and Primary Key.
7. Define weak and strong entity sets?
8. Explain the two types of participation constraint.
9. What is meant by functional dependencies?
10. What are all the characteristics of properly normalized database?

**PART-B**

**Answer any three Questions 3 x 10 = 30**

1. Explain briefly about all the components in database system architecture (Structures) with a neat diagram.
2. Write short notes on
3. Embedded SQL
4. Dynamic SQL
5. What is Normalization? Explain in details about 1NF, 2NF, 3NF and BCNF with suitable examples.
6. For the following relation schema: (Write Any five queries)

employee(employee-name, street, city)

works(employee-name, company-name, salary)

company(company-name, city)

manages(employee-name, manager-name)

Give an expression in SQL for each of the following queries:

1. Find the names, street address, and cities of residence for all employees who work for 'First Bank Corporation' and earn more than $10,000.
2. b) Find the names of all employees in the database who live in the same cities as the companies for which they work.
3. Find the names of all employees in the database who live in the same cities and on the same streets as do their managers.
4. Find the names of all employees in the database who do not work for 'First Bank Corporation'. Assume that all people work for exactly one company.
5. Find the names of all employees in the database who earn more than every employee of 'Small Bank Corporation'. Assume that all people work for at most one company.
6. Assume that the companies may be located in several cities. Find all companies located in every city in which 'Small Bank Corporation' is located.
7. Find the names of all employees who earn more than the average salary of all employees of their company. Assume that all people work for at most one company.
8. Find the name of the company that has the smallest payroll.