Enrolment Number: _____

P P SAVANI UNIVERSITY
P P SAVANI SCHOOL OF ENGINEERING
3rd Semester of B Tech Examination (2nd Internal Exam)

Subject: DATABASE MANAGEMENT SYSTEM (SECE2011)
Branches: CE/IT

[Date: 05/10/2018, Friday] [Time: 11.00 A.M. to 12.00 P.M.] [Total Marks: 30]

Instructions:

- Figures to the right indicate full marks.
- Q 1 & 2 are compulsory.
- Use of scientific calculator is allowed.
- Draw neat and clean drawings & Assume suitable data if necessary.

Q.1 Answer the following Questions (each carry 1 mark) **(05)**

1. What is Trivial Functional Dependency?
2. Every primary key is a super key. True/False
3. Define Normalization.
4. Define prime attributes.
5. Give example of Partial participation of entity in any relationship.

Q.2.A Draw E-R diagram for Library Management system. **(05)**

Q.2.B Consider following database schema and solve queries: **(05)**

customer = (customer_id, customer_name, customer_street, customer_city)
loan = (loan_number, amount)
borrower = (customer_id, loan_number)
payment = (loan_number, payment_number, payment_date, payment_amount)

1. Display all the customer names with their respective loan number and amount. (2 Marks)
2. Generate report of payment details for Ankit. (2 Marks)
3. List out all the payments done on 01-OCT-2018. (1 Mark)

Q.3.A Consider R(A,B,C,D,E,F) and following functional dependencies: **(04)**
A → BCDEF BC → ADEF B → F D → E
Find Candidate keys and what is the highest normal form? Justify it.

Q.3.B Explain concept of Generalization with example. **(04)**

Q.3.C In which case partial dependency never exist? Give suitable example. **(02)**

OR

Q.3.A Consider R(A,B,C,D,E,F,G,H) and following functional dependencies: **(04)**
ABC → DE E → FG H → G G → H ABCD → EF
Find Candidate keys and what is the highest normal form? Justify it.

Q.3.B Explain concept of Specialization with example. **(04)**

Q.3.C Briefly explain Transitive dependency with example. **(02)**

Q.4.A Briefly explain the problems in Un-normalized database. **(05)**

OR

Q.4.A Write down the steps to convert E-R diagram in to database schema. **(05)**