Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058, India

(Autonomous College Affiliated to University of Mumbai)

End Semester Evaluation(Synoptic)

July 2019

Max. Marks: 60 **Duration: 180 Min**

Class: S.E. **Semester: IV**

Course Code: CE42 and IT43 **Branch: Computer and IT**

Name of the Course: Database Management System

Instruction:

(1) All questions are compulsory

(2) Assume suitable data if necessary

Q No.		Max. Marks	CO
Q.1 (A)	Any correct five Codd's Rules = FIVE MARKS. **OR** Correct Illustration of three abstraction levels TWO MARKS and correct example representing content on three abstraction levels of database = THREE MARKS .	5	CO1
Q.1 (B)	Draw the Entity-Relationship diagram : **Bioinformatics Application case study** - Identifying Correct Strong entities = TWO MARKS - Identifying Correct Relationship sets = TWO MARKS - Identifying correct cardinalities = TWO MARKS - Identifying Weak entities total participation, multivalued attributes if any = ONE MARK	7	CO2
Q.2 (A)	RA AND TRC queries for the following Bank schema: On the seperate page at the last Solve following queries. a)Find the names of all customers who have a loan, an account, or both, from the bank. b) Find the names of all customers who have a loan and an account at bank. c) Find customer name,city and account number. d) Find customer name who have deposited more than one lakh. e) Find customer name and city of customers who have deposited more than one lakh.	2 3	CO3

Q.2 (B)	Consider the above Bank Schema to solve following SQL queries: PTO a)Find the names of those customers who have only borrowed but no deposited in the bank. b) Find the names of all customers who have a loan at the Perryridge branch but do not have an account at any branch of the bank. c) Find the largest account balance. d) Find branch-wise average balance. e) Find the count of those accounts that have balance greater than Rs.5,000. f) Find account number and balance of those accounts that have balance greater than average balance. g) Find the account number with maximum balance.	7	CO2
Q.3 (A)	One marks for each closuer A+=(ADE) , D+ =(DE),B+= B,(AB)+= (ABCDE) **OR** Each question carry two marks.(Proper inference rule required) a)Prove b)Disprove	4	CO1
Q.3 (B)	Anomalies in 3NF (2 Marks) The key of R = AB (2 Marks if all computation shown) Decomposition of 2NF= 2 Marks Decomposition of 3NF=2 Marks	8	CO4
Q.4 (A)	Describe the database privileges. Write SQL statement for the following. a) Create a Role of Manager. b) Grant create table and create view privilege to manager, c) Revoke create view privilege from manager. Database privileges.(2marks) a) System privileges b) Object privileges Each query carry one mark	3 2	CO4
Q.4 (B)	Trigger : Correct explanation and SQL TRIGGER syntax = FULL SEVEN MARKS **OR** Virtual Relation : Correct Syntax and explanation =(2+3+2)= FULL SEVEN MARKS	7	CO3
Q.5 (A)	State Diagram : Drawing (TWO MARKS) and explanation (THREE MARKS) **OR** Correct Compatibility Matrix = TWO MARKS. 2-phase Locking protocol= THREE MARKS	5	CO4
Q.5 (B)	What is checkpoint(THREE MARKS) How checkpointing (FOUR	7	CO5