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PRESIDENCY UNIVERSITY

BENGALURU

Mid - Term Examinations - March 2026

Date: 12- 03-2026

Time: 02:00pm - 03:30pm

School: SOCSE	Program: B.Tech	
Course Code : CSE2260	Course Name: Database Management Systems	
Semester: IV	Max Marks: 50	Weightage: 25%

CO - Levels	C01	C02	C03	C04	C05
Marks	26	24			

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

5Q x 2M=10M

1	Define Data model. List any two data models.	2 Marks	L2	C01
2	Differentiate between Procedural and Non-Procedural Language.	2 Marks	L2	C01
3	A company stores employee details. Each employee has an employee ID, name, and basic salary. House Rent Allowance (HRA) and net salary are calculated from the basic salary. An employee can have more than one skill. Identify different types of attributes.	2 Marks	L3	C01
4	List different types of Triggers.	2 Marks	L2	C02
5	Write a SQL query to find departments where the maximum salary is greater than 80,000	2 Marks	L3	C02

Part B

Answer the Questions.

Total Marks 40M

6.	a.	Explain in detail different types of database languages.	10 Marks	L2	C01
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	b.	A bank has many customers and branches . Customers can open multiple accounts (joint accounts allowed). Customers can take multiple loans . Each loan is approved by one branch and handled by one loan officer. Customers may also hold multiple credit cards , each linked to an account. Each card records multiple transactions . Design an E-R diagram by including following constraints. i) Weak entity (Transaction) ii) Participation Constraints iii) Cardinality ratio	10 Marks	L3	C01
Or					
7.	a.	Describe 3 – schema architecture with a neat diagram.	10 Marks	L2	C01
	b.	STUDENT(SID, Name, Dept) COURSE(CID, Title, Credits) PROFESSOR(PID, Name, Dept) TEACHES(PID, CID) ENROLL(SID, CID, Grade) Use Relational algebraic notations to solve following : i) Find names of students who are enrolled in all courses taught by Professor 'P1'. ii) Find students who have taken at least one course from every professor in the CSE department. iii) Find courses that are NOT taken by any student from the ECE department. iv) Find students who have enrolled only in courses taught by professor 'P2'	10 Marks	L3	C01

8.	a.	Illustrate comparison and logical operators with an example.	10 Marks	L2	C02
	b.	BOOK(book_id, title, available) MEMBER(member_id, name) BORROW(borrow_id, book_id, member_id, issue_date, due_date, return_date, fine) Create a trigger with the following conditions: i) Do not issue a book if not available ii) On issue → mark book unavailable iii) On return → calculate fine (₹10/day) iv) On return → mark book available	10 Marks	L3	C02
Or					
9.	a.	Illustrate aggregate functions with an example.	10 Marks	L2	C02
	b.	Consider EMP(emp_id, name, dept, basic) PAYROLL(emp_id, hra, da, pf, net_salary) Write a stored procedure to: i) Calculate salary components ii) Insert payroll details iii) Prevent duplicate payroll generation	10 Marks	L3	C02