Vivekananda College of Engineering & Technology, Puttur
[A Unit of Vivekananda Vidyavardhaka Sangha Puttur ®]
Affiliated to VTU, Belagavi & Approved by AICTE New Delhi

131

CRM08	Rev 1.16 (2024 rev)	CS	07/04/25

CONTINUOUS INTERNAL EVALUATION - 1

Dept:CS/AI/CD	Sem / Div: IV A & B	Sub: Database Management System	S Code: BCS403
Date:16/04/25	Time: 9:30-11:00	Max Marks: 50	Elective:N

Note: Answer any 2 full questions, choosing one full question from each part.

QN		Questions	Marks	RBT	CO's
		PART A			
1	a	Define DBMS. Explain characteristics of DBMS.	10	L2	CO1
	b	Develop a neat ER diagram for COMPANY database, specify constraints on relationships.	10	L2	CO1
	c	List the informal guidelines for relation schema and explain any 2 guidelines.	5	L2	CO3
		OR			
2	a	Explain three schema architecture and data independence with a neat diagram.	10	L2	CO1
	b	Develop a neat ER diagram for INSURANCE database specify constraints on relationships.	10	L2	CO1
	c	What is Normalization? Explain 3NF with example.	5	L2	CO3
		PART B			
3	a	Consider the schema for Student Database STUDENT(Sid, Sname, Major, Gpa) FACULTY(Fid,Fname,Dept,Designation, Salary) COURSE(Cid, Cname, Fid) ENROLL(Cid,Sid,Grade)	10	L2	CO2

		1. Retrieve the name of employees who are receiving salary more than 23456.00. 2. List the name of all faculty members who teaches the course "DBMS". 3. List all departments having an average salary of above 20,000. 4. List the name of students enrolled for course BCS403			
	b	Explain briefly domain, key, integrity and referential integrity constraints with examples.	10	L2	CO2
	c	Explain 1NF with example.	5	L2	CO3
		OR			
4	a	Consider the following Schema SAILOR(Sid,Sname,Rating,Age) BOAT(Bid,Bname,Color) RESERVE(Sid,Bid,Day) 1. Retrieve the color of boats reserved by Raj. 2. Retrieve the sailor names who have reserved red or green boats. 3. Retrieve the SID of sailors with age over 20 who have not reserved a boat. 4. Retrieve the total count of boats reserved by each sailor.	10	L2	CO2
	b	Explain with examples (i) Variants of JOIN operations (ii) Aggregate Functions	10	L2	CO2
	c	Explain BCNF with example.	5	L2	CO3

Prepared by: Pradeep Kumar K G

HOD