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RV COLLEGE OF ENGINEERING®

 $(An\ Autonomous\ Institution\ Affiliated\ to\ VTU)$

IV Semester B. E. Examinations Oct/Nov-2023

Artificial Intelligence and Machine Learning DATABASE MANAGEMENT SYSTEM

Time: 03 Hours Maximum Marks: 100

Instructions to candidates:

- 1. Answer all questions from Part A. Part A questions should be answered in first three pages of the answer book only.
- 2. Answer FIVE full questions from Part B. In Part B question number 2 is compulsory. Answer any ONE full question from 3 and 4, 5 and 6, 7 and 8, 9 and 10. In summary, entities represent objects or things, while relations describe how

A multivalued attribute is an attribute that can have multiple values for a single entity.

Example: In a Student entity, an attribute like Phone Numbers of the because a student might have more than one phone number.

Cuery Language (e.g., SQL is a query language used for data manipulation in

1 1.1	Define entity and relation. relational da	itabase	s.
1.2	A is a language that enables users to access or manipulate data.	01	
1.3	Define the multivalued attribute with an example.	02	1
1.4	Define naive and causal end users.	02	}
1.5	What are the roles of database designer?	02	
1.6	What is the difference between DELETE and DROP commands?	02	}
1.7	Explain collection and document in the context of MongoDB.	02	}
1.8	What is sharding?	01	
1.9	List two features of Cassandra.	02	}
1.10	Differentiate between DISTINCT and UNIQUE value in SQL.	02	}
1.11	What is key value pair? What is the usage of this in NoSQL.	02	ł

PART-B

2	a	List four significant differences between a file processing system and a DBMS.	06
	b	Describe the different types of languages used in DBMS with example.	10
3	a	List and discuss the data types supported by SQL with examples.	06
	b	Describe the importance of layered architecture and three schema architecture with a neat diagram.	10
		OR	
4	a	Discuss the constraints of relation model in DBMS.	08
	b	Applying the rules of ER diagram, write an ER diagram for the given Schema:	
		Doctor (SSN, FirstName, Lastname, Speciality, Years of Experience, PhoneNum)	
		Patient(SSN,Firstname, lastname, Address, DOB,	
		PrimaryDoctor_SSN)	
		Medicine(tradename, UnitPrice, GenericFlag)	
		Prescription(Id,Date, Doctor_SSN,patient_SSN)	
		Prescription_medicine(Prescription Id, Tradename, NumofUnits)	08

Solution Solution	_		How do you took for amounts relations and absorbe of damlicate tambo					
Consider the following table 1 and table 2: Table 1 Reg No Branch Section 1 CSE A 2 ECE B 3 CV A 4 IT B 5 IT A	5	a	How do you test for empty relations and absence of duplicate tuples					
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