KUMARAGURU college of technology
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Register Number: ……

MBA DEGREE EXAMINATIONS: NOV/DEC 2023

(Regulation 2021)

Third Semester

MASTER OF BUSINESS ADMINISTRATION

P21MBE0184: Database Management Systems

COURSE OUTCOMES

CO1: Explain the understanding of the fundamental principles of Database Management systems.

CO2: Display the competence to manage data using Database Management Systems.

CO3: Build an appropriate Database Design based on the business problem.

Time: Three Hours **Maximum Marks: 100**

PART A (1Q x 16M = 16 Marks) Compulsory

1.	In hospital, there are many departments like Orthopedic, Pathology, Emergency, Dental, Gynecology, Anesthetics, I.C.U., Blood Bank, Operation Theater, Laboratory, M.R.I., Neurology, Cardiology, Cancer Department, Corpse, etc. There is an OPD where patients come and get a card (that is, entry card of the patient) for check up from the concerned doctor. After making entry in the card, they go to the concerned doctor's room and the doctor checks up their ailments. According to the ailments, the doctor either prescribes medicine or admits the patient in the concerned department. The patient may choose either private or general room according to his/her need. After the treatment is completed, the doctor discharges the patient. Before discharging from the hospital, the patient again has to complete certain formalities of the hospital like balance charges, test charges, operation charges (if any), blood charges, doctors' charges, etc. Next we talk about the doctors of the hospital. There are two types of the doctors in the hospital, namely, regular doctors and call on doctors. Regular doctors are those doctors who come to the hospital daily. Calls on doctors are those doctors who are called by the hospital if the concerned doctor is not available. Construct a ER and UML diagram and create necessary tables along with constraints used in Hospital Management database with example	CO3	[K_6]

PART B (10Q x 2M = 20 Marks)

2.		List the advantages of database systems.		CO1	[K_1]
3.		List the roles of database administrator in DBMS and how the role of database administrator changed over time?		CO1	[K_2]
4.		What are the different levels of data independence?		CO2	[K_1]
5.		Compare physical and logical level of abstraction.		CO2	[K_5]
6.		Distinguish strong entity set with weak entity set.		CO3	[K_3]
7.		How to compare data base normalization techniques?		CO3	[K_3]
8.		What are the different types of joins in SQL.		CO1	[K_2]
9.		List the reasons why we may choose to define a view?		CO1	[K_4]
10.		List the ACID properties of a transaction.		CO1	[K_3]
11.		What are the methods for dealing deadlock problem?		CO2	[K_3]

PART C (4Q x 16M = 64 Marks) Answer Any Four Questions Only

12.	a)	Describe in detail about the database system architecture with neat diagram.	10	CO1	[K_2]
	b)	List out the significant differences between a file-processing system and a DBMS.	6	CO1	[K_2]
13.		Why data models are important? Describe in detail about the basic data-modeling building blocks and influence of business rules in modeling.	16	CO2	[K_3]
14.		Construct an ER diagram for car service system with a set of cars and a set of service man. Associate with each car with the service man and servicing cost needs to be included for each service request. Discuss the car service System data base design with suitable table description and also identify the query reports from the table for the benefit of the car service system manager.	16	CO2	[K_4]
15.	a)	Consider the following relational schema Employee(empno,name,office,age) Books(isbn ,title,authors,publisher) Loan(empno, isbn,date) Write the following queries. (i) Find the names of employees who have borrowed a book Published by McGraw-Hill?	10	CO2	[K_3]

(ii) Find the names of employees who have borrowed all books Published by McGraw-Hill?

(iii) Find the names of employees who have borrowed more than five different books published by McGraw-Hill?

(iv) For each publisher, find the names of employees who have borrowed?

	b)	Describe in detail about the different types of integrity constraints and also list the aggregate functions supported by SQL.	6	CO2	[K_3]
16		Describe in detail about the SQL facilities for concurrency and two phase locking protocol and consider the online-trade application that contains product data, availability and pricing information, order-tracking facilities, and generating recommendation lists and identify the task that requires concurrency method for building the application	16	CO3	[K_4]

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