Program:	**F.Y.B.Sc IT**	**Semester:**	**I**	**Program Code:**	**UGIT01**
Course:	**Database Management System**			**Course Code:**	**NUIT102**

Duration: 1 Hour **Examination Pattern:** NEP-Autonomous- External **Max. Marks:** 30

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Draw neat diagrams wherever necessary.
4. CO (Course Outcome), KL (Knowledge Level).

Examination:

REGULAR

Q. 1		**Attempt any THREE of the following.**	[15]	CO's	KL's
	(a)	Write short notes on the following database languages: i) Data Definition Language ii) Data Manipulation Language		CO6	L2
	(b)	Explain the terms Relation, Tuple, Attribute, Domain, and Degree in a relational database.		CO4	L2
	(c)	Explain the components of an Entity-Relationship (ER) Diagram, including Entities, Attributes and Relationships with suitable examples.		CO3	L2
	(d)	Explain the different levels of data abstraction in DBMS. Illustrate your answer with a neat and labeled diagram.		CO2	L2
	(e)	Analyze the given Hospital Management System requirements and draw a suitable ER Diagram: Patient (PatientID, Name, Age, Gender, PhoneNumber) Doctor (DoctorID, Name, Specialization) Appointment (AppointmentID, Date, Time) Department (DepartmentID, DepartmentName) Rules: Each doctor works in one department, and each department has many doctors. A patient can book many appointments. One doctor can attend many appointments.		CO3	L4
Q. 2		**Attempt any THREE of the following.**	**[15]**	**CO's**	**KL's**
	(a)	Explain the ACID properties of a database transaction with suitable examples.		CO1	L2
	(b)	List the different states of a transaction in DBMS.		CO1	L1
	(c)	Analyze the need for Normalization and explain how a relation can be converted into First Normal Form (1NF) with a suitable example.		CO5	L4
	(d)	Define Deadlock in DBMS.		CO1	L1
	(e)	Write SQL queries for the following operations: i) Create a table Employee with column like ID, Name, Salary. ii) Employee records in which name ends with 'i'. iii) Display employee records where Name starts with 'P'. iv) Display the name of employee who has the minimum salary from the table employee. v) Add column Address in the table employee.		CO6	L3

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