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## PRANVEER SINGH INSTITUTE OF TECHNOLOGY, KANPUR

Odd Semester

hospital.

Session 2023-24

CT -1

B. Tech.-5<sup>th</sup> Semester

CO	Database Management System (KCS-501)  Course Outcome
	C detabase systems.
Number	Define [L1: Remember] facts, terms, basic concepts of database systems.  Define [L1: Remember] facts, terms, basic concepts of database systems.
CO1	Define [L1: Remember] tacks, the period in t
CO2	Explain [L2: Understand] basic disconnection processing and others.  database like keys, constraints, transaction processing and others.
CO3	Demonstrate [L3: Apply] acquired knowledges of database management system like Normalization, Serializability, of database management system like Normalization, Serializability, transaction control and others.
CO4	Examine [L4: Analyze] and breaking information and provided motives or causes; making inferences and finding evidence to support generalization in different problems of database management.

	generalization in different problems of database management	III.
		M. M. 15
	ne: 1.5 Hrs.	(1X3 = 3 Marks)
	empt all questions: Define DBMS catalog.	COI
	Explain Logical and Physical Data Independence.	CO2
b)		COI
c)	Define Weak Entity with suitable example.	
	Section B	(2X4 = 8 Marks)
Q2. A	ttempt all questions:	
a i)	List the characteristics of DBMS.  Or	COI
ii)	Define the types of users in DBMS.	CO1
bi)	Explain Integrity constraint and types with suitable example.  Or	CO2
ii)	Explain types of relationships among entities with suitable diagram.	CO2
c i)	Describe 3-Schema architecture with suitable diagram.  Or	CO2
ii)	Describe Generalization and Specialization with suitable diagram.	CO2
d i)	Draw the ER diagram for a hospital to maintain the records of various deprooms, and doctors in the hospital. It also maintains records of the regular patients admitted in the hospital, the checkup of patients done by the regis the patients may be operated by doctor on call, admitted patients also discipline.	patients, tered doctors

Draw the ER diagram for different trains, train status, and passengers. The record of train includes its number, name, source, destination, and days on which it is available, whereas ii) record of train status includes dates for which tickets can be booked, total number of seats available, and number of seats already booked.

## Section C

(4X1 = 4 Marks)

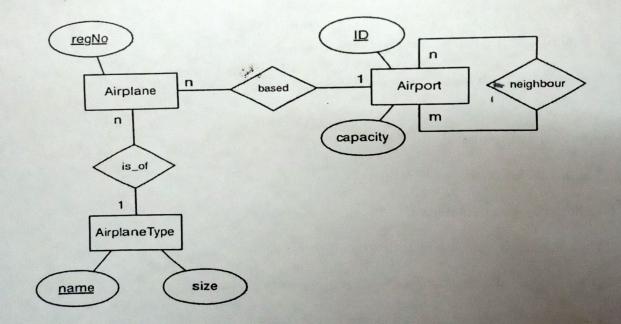
- Consider the following schema and write SQL syntax as mentioned-CO<sub>3</sub> Q3
- Reserves (Sid, Bid, day, colour) DATATYPE-Sid and Bid are integer, day should datetime and Colour is having character type i)

CONSTRAINTS- Sid and Bid as PRIMARY KEY, Colour have only three type values. (Green/Red/Blue).

Also, assign the date of booking should be of any future date only. (not current or past date).

Or

- Consider the following schema: 1. Apply ER to relational model conversion rule for the above ER. ii)
  - 2. Construct DDL syntax for every relation which identified in step 1.



CO<sub>3</sub>