Total No. of Questions : 4]

PD-435

SEAT No. : 33

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# [6409]-282

## S.E. (Computer Science & Engineering (Data Science)) (Insem.)

## DATABASE MANAGEMENT SYSTEM

## (2019 Pattern) (Semester - IV) (210655)

*Time : 1 Hour]* *[Max. Marks : 30*

*Instructions to the candidates :*

1) *Answer Q.1 or Q.2, Q.3 or Q.4.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Figures to the right side indicate full marks.*
4) *Assume Suitable data, if necessary.*

*Q1)* a) Define Database. Explain purpose of Database. [6]

b) What are the limitations in Conventional File System? [5]

c) Explain DCL and TCL with example. [4]

OR

*Q2)* a) Explain View of data and its level of abstraction. [6]

b) Explain Object-Oriented Database. [5]

c) Define the following : [4]

i) Primary Key ii) Foreign Key

*Q3)* a) Draw the neat diagram of Database System Structure and explain its components in detail. [7]

b) Construct an ER Diagram for a database for the National Hockey League (NHL). [8]

- the NHL has many teams,
- each team has a name, a city, a coach, a captain, and a set of players,
- each player belongs to only one team, each player has a name, a position (such as left wing or goalie), a skill level, and a set of injury records,
- a team captain is also a player,
- a game is played between two teams (referred to as host_team and guest_team) and has a date (such as May 11th, 1999) and a score (such as 4 to 2),

*P.T.O.*

OR

*Q4)* a) What is Constraint? Explain the concept of Referential and Entity Integrity constraint with example. [7] (2)

b) Draw an ER diagram for the following application from the ABC Company: [8] (4)

- Employees work for many projects and each project has many employees.
- Each employee has an unique Emp_no
- Each employee has a name and name consists of first name, middle name and last name
- Each project has an unique number and name

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