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SEAT No. :

PC-25

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**T.E. (Computer Engg) (Artificial Intelligence and Data Science)**

**DATABASE MANAGEMENT SYSTEM  
(2019 Pattern) (310241) (Semester - I) (Insem)**

*Time : 1 Hour]*

*[Max. Marks : 30*

*Instructions to the candidates:*

- 1) *Answer Q1 or Q2, Q3 or Q4.*
- 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)** Compare DBMS and File processing system in terms of data isolation, data redundancy, data inconsistency, data integrity. **[4]**

b) A reputed general hospital has decided to computerize their operations. In the hospital many doctors are working. Personal information of doctors is maintained to get them fixed salary per month. The patients are admitted to the hospital into the room. They are treated by various doctors. Sometimes patients perform certain pathological tests which carried out into the labs. Identify the relationship among the entities along with the mapping cardinalities, keys in the E.R. diagram. Construct appropriate tables for E-R diagram designed with above requirements. **[7]**

c) A weak entity set can always be made into a strong entity set; by adding to its attributes the primary key attributes of its identifying entity set. Outline what sort of redundancy will result if we do so while converting to tables. **[4]**

OR

**Q2) a)** What is Specialization and generalization in Extended E-R diagram? What is the difference between them? Why do we not display the difference in schema diagram? **[7]**

b) Draw architecture of DBMS system and explain function of following components: **[8]**

- i) Storage manager
- ii) Query Processor

**P.T.O.**

**Q3) a)** Consider following schema [4]

Student\_fee\_details (rollno, name, fee\_deposited, date)

Write a trigger to preserve old values of student fee details before updating in the table.

b) What is view and how to create it? Can you update view? If yes, how? If not, why not? [6]

c) Consider following schema [5]

Hotels(hotel\_no,hotel\_name,city)

Rooms(Room\_no,hotel\_no,price,type)

Write a PL/SQL procedure to list the price & type of all rooms at the hotel 'TAJ'

OR

**Q4) a)** Consider the following relation schema [6]

MOVIES(Mov\_Id, Mov\_Title, Mov\_Year, Dir\_Id)

DIRECTOR(Dir\_Id, Dir\_Name)

RATING(MOV\_Id, Rev\_Stars)

Write the SQL queries for the following.

i) List the title of all the movies directed by 'RAJ KAPOOR'

ii) Find the name of movies and number of stars for each movie. Sort the results on movies title and from higher stars to least stars.

iii) Assign the rating of all movies directed by 'Steven Spielberg' to 9.

b) What is the importance of creating constraints on the table? Explain with example any 4 constraints that can be specified when a database table is created. [5]

c) What is synonym? How to create and use synonym in SQL? [4]

