

Assignment-

- ① Why would you choose a database system instead of simply storing data in operating system files? When would it make sense not to use a database system?
- ② What is logical data independence and why is it important?
- ③ Explain the difference between logical and physical data independence.
- ④ Explain the difference between external, internal and conceptual schemas. How are these different schema layers related to the concepts of logical and physical data independence?
- ⑤ What are the responsibilities of DBA?
- ⑥ Distinguish between logical and physical database design.
- ⑦ Describe and define the key properties of a database system. Give an organizational example of the benefits of each property.
- ⑧ Explain the significance of ER Model for database design?
- ⑨ Enumerate the basic constructs of ER Model.
- ⑩ Describe properties of relations and relational keys & integrity constraints.

① Design an E-R diagram for keeping track of exploits of your favorite sports team. You should store the matches played, the scores in each match, the players in each match, and individual player statistics for each match. Summary statistics should be modeled as derived attribute.

② A university registrar's office maintains data about the following entities:

- Course, including number, title, credits, syllabus and pre requisites;
- Course offering, including course number, year, semester, section number, instructor(s), timing and class room;
- Student, including student-id, name and program.
- Instructors including identification number, name, department & title

Further, the enrollment of students in course and grades awarded to students in each course they are enrolled for must be appropriately modeled. Construct an E-R diagram for registrar's office. Document all assumptions that you make about the mapping constraints.