[Time: 3 Hours]   **[Marks: 80]**

N.B. : (1) Question No 1 is Compulsory.
          (2) Attempt any three questions out of the remaining five.
          (3) All questions carry equal marks.
          (4) Assume suitable data, if required and state it clearly.

1   Attempt any FOUR   **[20]**

a   Compare File Processing System with Database Management system   **05**

b   **05**

T1	T2
read(A) A := A − 50	
	read(A) temp := A ∗ 0.1 A := A − temp write(A) read(B)
write(A) read(B) B := B + 50 write(B) commit	
	B := B + temp write(B) commit

Draw the precedence graph for above schedule?

c   Define with an example different type of Entities in ER diagram   **05**

d   Define Triggers. Write syntax and example of trigger.   **05**

e   Explain five aggregate functions of SQL with example?   **05**

2 a   Design an EER diagram for Hospital Management System. And map it into   **[10]**
          relational model. Assume Suitable data.

     b   Brief overall database architecture with suitable diagram.   **[10]**

3 a   Consider the following employee database.   **[10]**

          Employee (empname, street, city, date_of_joining)

          Works (empname, company_name,salary)

          Company (company_name, city)

          Manages (empname, manager_name)

     Write the SQL queries for each of the statements given below