Q.1 Explain with examples the important aspects connected with the definition of distributed database (DDB). What are the problems between these aspects? What are the various topologies configuration used for physically connected sites? And what are the differences between them?

Q.2 What are the problems connected with process design of DDB? and what are the objectives should be taken into account when design data distribution?

Q.3 Explain with example the measure of cost and benefits of vertical fragmentation with in determining the allocation of fragments for replication and redundant allocation.

Q.4 What we mean by network transparency? and what are the relation between network transparency and local autonomy? Explain the network transparency and local autonomy from the point of naming and local autonomy, and transparency and updates.

Q.5 In order to build a robust DDB system, it is important to know what kinds of failures can occur.
   a. list and explain possible types of failure in DDB system.
   b. Which items in your list are applicable also to a centralized system?

Q.6 Consider the following relations for DDB:
   الموظفين EMP (EC, EN, EA, EJ)
   الأقسام DEP (DC, DN, DA, EC)

   Assume the EMP relation is fragmented vertically by EC,EN and EA,EJ. And DEP relation is fragmented horizontally by EA. Describe a good strategy for processing each of the following queries:
   a. Find the names of employees work in city Baghdad and live in city Basra.
   b. Find department name not in city Baghdad,
   c. Find employee job (EJ) of employees in department computer,