1.	a) A particular software engineer and customer do not see eye-to-eye and their lack of trust during the requirements phase is jeopardizing the project. What issues would you explore to resolve the crisis? b) It is often claimed that the quality of a design can be assessed in terms of three features: 'Control structure', 'modularity' and 'hierarchy'. Explain c)How would you perform an effort estimate on a project that is completely different from any of the projects done so far in the organization? How the size of the organization in terms of resources affects the process model & practices to be implemented. e) What are the various elements of a scope statement? f) What you understand by Concept quantification. Explain with the help of an example. g) What you mean by Strategic and operational relevance of an IT Project. Explain. h) What are the benefits of software process improvements i) Explain CMM Level 4 . What are the activities and characteristics at this level of CMM?
2	a) Describe all the phases of water fall model in context of a railway reservation system. b) Explain why the process of software project planning is an iterative one and why a plan must be continually reviewed during a software project c) Consider yourself as the project manager of a medium level project on banking? What baselines would you define for the project and how would you control them.
3	a) An institute has a creative computing society to serve the students to upgrade their creativity and computing skills. The society organizes various events for students at inter and intra institute levels. The students need to register for various events and the organizers need to organize the events in an orderly manner. Thinking yourself as the member of the technical team of the society assigned with a project to fully automate the working of the society events. Make a Data Flow diagram up to the levels you consider appropriate for the problem. Any assumptions should be clearly specified. b) The institute is organizing an entrance test for admission to various courses. The test needs to be prepared by experts. The test will be conducted at various centers across India. A team of persons will be sent to organize the test at each center. Answer sheets needs to be evaluated and the merit list needs to be prepared. If we need to make a software project for this activity, make a suitable ER diagram taking the above into considerations. Kindly write any assumptions you are taking into account.
4	Solve the questions at the end in context of the following Case Study : Super Requirements In spring 2000, I was consulting for an e-business solution provider that was struggling over what features to include in its next major product. This company was unusual in that the vice presidents of product development and marketing seemed to respect each other. The development VP trusted the

marketing VP's assessment of the changing market dynamics. The marketing VP trusted the estimates that the development VP provided. Both VPs realized that their employees needed to work together to solve this marketing puzzle instead of attacking each other, as in most companies. The company had already had numerous brainstorming sessions with their existing and potential customers, which resulted in around 200 candidate requirements. To satisfy all those requirements would take around 18 months, but the customers who were depending on their foundation solution needed it in just six months. My first recommendation was to begin with fewer requirements. It would simply take too long to perform triage on all 200. I suggested that they group the requirements into small sets of features or super-requirements—that they could sell as a package to aid a customer in satisfying one or more business goals. The requirements within each set also had to be closely related from an implementation perspective. That is, the developers could easily visualize how to implement them as a package. After a two-hour discussion, we arrived at a list of some 30 super-requirements. We debated a variety of business strategies and finally converged on the concept of building a series of very small increments, while keeping customers informed of all our plans. Our goal was to develop a group of extremely loyal product users who would always know the date of the next release, the requirements the next release would satisfy, and so on. We invited select customers to a meeting at the corporate offices to explain our strategy and what we needed from them. It took a full day of discussion with the customers to arrive at a schedule of 10-week releases and their associated super-requirements. (The first release would take a bit longer because we had to build much of the supporting infrastructure.) We analyzed the first five releases separately to ensure that they were feasible. The customers were excited. Marketing was thrilled. Product development was confident that they could deliver each release on time. The first release of the product was created without a hitch, within budget, and with no surprises, and customers were satisfied with its functions. Unfortunately, soon after the first release, new customers emerged, market needs changed, and cooperation started to ebb within the company. As a result of the earlier meetings, product development was making many technical decisions that were based on the agreed-to releases and associated super-requirements. When needs changed, the esprit de corps began to erode. Rather than rethink prior decisions, they viewed changing needs as a threat to the success of the entire project.

a) "This company was unusual". Explain.

b) How the Company planned to fulfill the customer's expectations. Was it a sound decision based on software engineering Principles?

c) What are super requirements? What are the various guidelines for making the super requirements?

d) How the new situation that emerged after the changing market scenario should be handled?