1. Define Software Engineering.
2. What is Software Development Life Cycle? (SDLC)
3. Write out the reasons for the Failure of Water Fall Model?
4. Explain requirement engineering and also explain the FAST elicitation technique.
5. What are the Drawbacks of RAD Model?
6. Explain the notations and levels of DFD. Represent the same with example.
7. Draw a diagram for pure waterfall life cycle.
8. Explain the different phases involved in waterfall life cycle.
9. What is feasibility study? What are the contents we should contain in the feasibility report?

***Hint***

A feasibility study is an initial look at an existing information processing system to decide how it might be computerized or improved.

The contents that a feasibility report are:

* A statement of purpose of the system.
* A definition of system scope.
* A list of deficiencies of the current system.
* A statement of user requirements.
* The cost and benefits of development.
* A conclusion and recommendations.

1. What is the difference between SRS document and design document? What are the contents we should contain in the SRS document and design document.
2. What are the purposes of Data Flow diagrams, Entity-Relationship diagrams? Give an example diagram of each.
3. Explain the non-functional software quality attributes.
4. Explain all the phases involved in the implementation phase.

***Hint***

* Conduct system Test
* Prepare Conversion Plan
* Install Databases
* Train Users
* Convert to New System

1. What is user acceptance testing? Explain different testing in user acceptance testing. Why is it necessary?
2. *“Software should be loosely coupled and highly cohesive”*. Explain this phrase and also explain best and worst type of coupling and cohesion.
3. What is software project planning? Discuss the various size and cost estimation techniques.
4. Discuss the COCOMO in detail. Also brief what are the merits of COCOMO over Waltson & Felix Model?
5. List and explain different types of testing done during the testing phase.
6. What are functional and non-functional requirements?
7. Mention the modern coding practices and guidelines. Brief some code inspection techniques.
8. How we can prepare the data for testing for black-box testing.
9. Mention the modern coding practices and guidelines. Brief some code inspection techniques.
10. Write short notes on the following:
    1. Type checking
    2. Verification & Validation
    3. Scoping rules & exception handling
    4. Quality Function Deployment (QFD)
11. Explain ER diagram and all the notations associated with example.
12. What is testing? Discuss the categories and levels of testing.
13. “*Software maintenance is the most expensive practice throughout the life-cycle*” Explain. Also mention the categories of software maintenance.
14. Software Configuration