**Questions for Mid Semester exam [Software Engineering (2160701)]**

1. Explain incremental model for system development. Differentiate it with spiral model.
2. Draw the Data Flow Diagram with different levels for withdraw& deposit of money in a bank.
3. What is software prototyping? Explain its significance in software engineering with example.
4. Prepare a state diagram for Microwave Oven showing all states of it.
5. Define FOUR Ps for project management and explain them in detail.
6. List and explain requirement engineering tasks.
7. What is activity diagram and swim-lane diagram? Draw activity diagram for Billing Counter of a shopping mall.
8. Draw and explain Process Framework.
9. How do we define software engineering? Draw & explain software engineering layers.
10. What is Object Oriented Design of a system? Create a class diagram showing all possible relationships between classes of a system.
11. Explain in detail the process model which is normally suited for development of large-scale software system.
12. Explain Spiral model with suitable example. Also explain how it differs from Software prototyping model.
13. Explain function point analysis method. Compute the function points for the following data set: Inputs =8, Outputs= 12, Inquiries = 4, Logical files = 41,Interfaces =1 and Σ Fi = 41.
14. What is SRS? Why SRS is known as black-box specification of the system?What are major issues addressed by SRS?
15. Explain the process model which is used in situations where the requirements are well defined.
16. Write short note on: Software Project Management.
17. What is the role of software engineer. Compare hardware and software product characteristics.
18. Explain spiral model and Concurrent Development Model.
19. Define: Feasibility Study , CMM Level
20. Explain Requirement Analysis with example.
21. What is Relationship ? Explain Cardinality and Modality with Examples
22. Compare Prototype and RAD Process Model.
23. Draw Use case diagram for Hospital Management System.
24. Compare Incremental and Waterfall Process Model.
25. Explain Functional and Non Functional Requirement for Hotel Management System.
26. Explain Risk Management , Monitoring and Mitigation
27. Draw and explain Software Engineering layers
28. Write and explain briefly possible reasons for project failure.
29. Describe two main features of Spiral model and discuss working of Prototyping model with its diagram.
30. Discuss umbrella activities and its role in software development life cycle (SDLC).
31. Draw context diagram and data flow diagram (DFD) for Airlines Reservation System.
32. Describe process of requirement engineering in detail
33. Discuss all generic frame work activities of software engineering with respect to any one process model
34. Discuss Incremental process model with its diagram and compare with Waterfall model
35. What is Process ? What is Product?
36. Explain Requirement engineering process.
37. Explain Spiral Process Model and its advantages .
38. Explain Feasibility Study of College Management System.
39. Explain Feasibility Study of Hospital Management System
40. Explain Functional and non functional requirement
41. Explain Prototype model and compare it with Water Fall process model .
42. Draw E-R Diagram for university result system
43. What are the steps in software Project Planning? What is effort estimation?
44. Explain Spiral Model and its advantages. Compare Prototype Model and Spiral Model.
45. Explain Feasibility Study with the example of ATM Machine in Banking System. Draw use case diagram of ATM Machine
46. List five requirement of Library management System. Draw DFD lavel-0 and DFD Level-1 for Library Management System.
47. What is Software Measurement? How to Calculate Cost of Software? Explain Software metrics used for S/w cost estimation
48. Explain Functional Requirement and Non Functional Requirement with example of Hospital Management System
49. What are the characteristics of SRS?
50. Explain user interface design concepts with example.
51. Explain architectural design elements.
52. List different Agilie development methods.
53. Explain Extreme programming process.
54. Define module coupling and cohesion. Explain different types of cohesion and coupling.
55. What is the difference between software architecture and software design?
56. What is object oriented design of system?
57. Compare procedural design with object oriented design.
58. What is UI? Explain the design model for UI.
59. What is the different architectural style in design?
60. Explain data – centred and data-flow architecture.
61. Explain the graph matrix and loop testing methods.
62. What is cyclomatic complexity? How it is determined for flow a graph? Illustrate with an example.
63. Define steps to find the cyclomatic complexity using flow graph.
64. Explain black box and white box testing.
65. What is testing? What is the role of tester? Compare black box and white box testing.
66. Explain the object oriented testing strategies.
67. What is importance of testing practices? What are the principles of testing practices?
68. Explain testing strategy for conventional software architecture. Draw the spiral diagram showing testing strategies with phases of software development.
69. Draw the flow graph for finding maximum of three numbers and derive the test cases using cyclomatc complexity.
70. What is black box testing? Explain any one technique to carry out black box testing.
71. Differentiate between OO testing strategies and conventional strategies.
72. What is mobile testing? Mention the challenges in mobile testing.
73. Explain the concept of automated testing tool along with advantages and disadvantages of it.
74. Write a note on: (a) Win Runner (b) Load Runner