Software Engineering

Unit I – Introduction to Software Engineering

S.No	Questions	BT	CO
1	What is Software Development Life Cycle.	L1	CO1
2	Distinguish between software process and project.	L4	CO1
3	List the task regions in the spiral model	L1	CO1
4	What is Software and Software Engineering?	L1	CO1
5	Discuss about changing nature of software.	L1	CO1
6	Software Engineering a layered Technology.	L1	CO1
7	What are the advantages of Unified process.	L1	CO1
8	Explain various software myths.	L1	CO1
9	What are the merits of Incremental models?	L1	CO1
10	What are advantages of evolutionary process models?	L3	CO1
11	Explain CMMI model with a neat sketch	L1	CO1
12	Discuss in brief about the Waterfall model.	L1	CO1
13	What are the five generic process frame work activities? Explain.	L1	CO1
14	Give an overview of unified process model.	L1	CO1
15	State and explain various software myths.	L1	CO1
16	What are the merits of incremental model?	L1	CO1
17	Explain CMMI model with a neat sketch.	L1	CO1
18	Write the process assessment.	L2	CO1
19	What is legacy software? Explain briefly its impact in software engineering.	L3	CO1
20	Explain the following Spiral Model.	L1	CO1
21	Discuss about the changing nature of software.	L1	CO1
22	Software Engineering a layered Technology.	L1	CO1

Unit II – Software Requirements

S.No	Questions	BT	CO
1	What is meant by system requirements?	L1	CO2
2	What are the differences between functional requirements and Non –functional requirements?	L4	CO2
3	Explain about context models	L3	CO2
4	What models is feasibility study?	L1	CO2
5	What are the non-functional requirements?	L1	CO2
6	What are the characteristics of good SRS document?	L1	CO2
7	What is meant by Requirement management?	L1	CO2
8	Explain about behavioral models	L1	CO2
9	Explain about data models	L1	CO2
10	Explain about object models	L1	CO2
11	Discuss in detail about system requirements.	L1	CO2
12	List and explain the data model in brief.	L1	CO2
13	Explain how a software requirements document is structure.	L1	CO2
14	Give a brief summary on requirements elicitation and analysis phases of Requirements engineering process	L2	CO2
15	Explain clearly about software requirements document	L1	CO2
16	State and explain various aspects in requirements validation process.	L1	CO2

17	Describe five desirable characteristics of a good software Requirement specification document.	L1	CO2
18	Give an overview of various system models.	L1	CO2
19	Explain how a software requirements document is structure	L1	CO2
20	Write the System models: i).context model ii).Behavioral model	L1	CO2
21	Explain clearly about software requirements document	L1	CO2
22	Write the System models: i).Data model ii).Object model	L3	CO2

Unit III-Design Engineering

S.No	Questions	BT	CO
1	Write brief notes on data design.	L1	CO3
2	Name the commonly used architectural styles	L1	CO3
3	Write about interface design evaluation	L1	CO3
4	List the guidelines for data design.	L2	CO3
5	Define design process.	L1	CO3
6	List the principles of software design.	L1	CO3
7	List the guidelines for data design.	L1	CO3
8	Name the commonly used architectural styles.	L1	CO3
9	What are the goals of the design process.	L1	CO3
10	Define software architecture.	L1	CO3
11	Describe architectural architecture styles and patterns.	L1	CO3
12	Draw and explain sequence diagrams with an example.	L1	CO3
13	Write a short note on data design.	L1	CO3
14	Explain the following diagrams. i).Class diagrams ii) Sequence diagrams.	L3	CO3
15	Discuss about mapping data flow into software architecture.	L1	CO3
16	Explain about conducting component level design.	L1	CO3
17	Define Software architecture. Explain why it may be necessary to design the system architecture before the specifications. Compare Functionoriented and object oriented designs	L1	CO3
18	Explain the following diagrams. i).Collaboration diagrams ii)Use case diagrams	L3	CO3
19	Describe architectural architecture styles and patterns	L1	CO3
20	Write a short note on data design.	L3	CO3

Unit IV-Testing Strategies

S.No	Questions	BT	CO
1	What is meant by debugging.	L1	CO4
2	Write a short note on black box testing.	L1	CO4
3	What do you mean by software design quality? Explain.	L1	CO4
4	Define black box testing strategy.	L1	CO4
5	List the metrics for design model.	L1	CO4
6	Define Testing.	L1	CO4
7	List the metrics for source code.	L3	CO4
8	What is regression testing.	L1	CO4
9	Differentiate between black-box and white-box testing.	L3	CO4
10	Explain clearly about metrics for software quality	L1	CO4
11	Describe Strategic approach to software testing.	L1	CO4
12	Differentiate between black-box and white-box testing.	L2	CO4
13	Explain software quality and metrics for analysis model.	L3	CO4

14	What is black box testing Explain.	L1	CO4
15	Discuss about metrics for design model and source code	L2	CO4
16	Explain clearly about metrics for software quality	L3	CO4
17	Distinguish between error and failure. Which of the two is detected by testing? Justify	L1	CO4
18	Explain how black box testing differs from white box testing.	L1	CO4
19	What are the metrics used for testing? Discuss.	L1	CO4
20	Differentiate between black-box and white-box testing.	L3	CO4

Unit V-Metrics for Process & Products

S.No	Questions	BT	CO
1	What is meant by software measurement?	L1	CO5
2	Discuss the reactive risk strategy.	L1	CO5
3	What is meant by software reliability?	L1	CO5
4	Differentiate between reactive risk and proactive risk strategies.	L2	CO5
5	What is software reliability and how this parameter helps in managing software quality?	L!	CO5
6	Write short notes RMMM.	L1	CO5
7	Write short notes RMMM Plan.	L3	CO5
8	Define Risk Refinement.	L1	CO5
9	List the metrics for Design model.	L3	CO5
10	Give the different categories of risks.	L1	CO5
11	Write a detailed note on ISO9000 quality standards	L1	CO5
12	RMMM Write short notes.	L2	CO5
13	Discuss about various metrics for software quality.	L1	CO5
14	Various metrics for process and products	L2	CO5
15	Explain about formal technical reviews	L2	CO5
16	Explain about risk projection and risk management	L1	CO5
17	What do you mean by risk management? Explain how to select the bestrisk reduction technique when there are many ways of reducing a risk?	L1	CO5
18	What types of risks occur during software development? Discuss.	L3	CO5
19	Discuss about various metrics for software quality.	L2	CO5
20	Explain about formal technical reviews	L1	CO5