SUBJECT: 23CS405 –SOFTWARE ENGINEERING

8. Unit wise Question Bank

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 of software myths.	L1	CO1
9		What are the merits of Incremental model?	L1	CO1
10		What are advantages of evolutionary process models?	L3	CO1
11	a)	Explain CMMI model with a neat sketch	L1	CO1
	b)	Discuss in brief about the Water fall model.	L1	CO1
12	a)	What are the five generic process frame work activities? Explain.	L1	CO1
	b)	Give an overview of unified process model.	L1	CO1
13	a)	State and explain various of software myths.	L1	CO1
	b)	What are the merits of incremental model.	L1	CO1
14	a)	Explain CMMI model with a neat sketch.	L1	CO1
	b)	Write the process assessment.	L2	CO1
15	a)	What is legacy software? Explain briefly its impact in software Engineering.	L3	CO1
	b)	Explain the following: Spiral Model.	L1	CO1
16	a)	Discuss about the changing nature of software.	L1	CO1
	b)	Software Engineering a layered Technology.	L1	CO1

UNIT-II

Software Requirements

S.No	Questions	BT	CO
1	What is meant by system requirements?	L4	CO2
2	What are the differences between functional requirements and non-functional requirements?	L3	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	a)	Discuss in detail about system requirements.	L1	CO2
	b)	List and explain the data model in brief.	L1	CO2
12	a)	Explain how a software requirements document is structure.	L1	CO2
	b)	Give a brief summary on requirements elicitation and analysis phases of Requirements engineering process	L2	CO2
13	a)	Explain clearly about software requirements document	L1	CO2
	b)	State and explain various aspects in requirements validation process.	L1	CO2
14	a)	Describe five desirable characteristics of a good software requirement specification document.	L1	CO2
	b)	Give an overview of various system models.	L1	CO2
15	a)	Explain how a software requirements document structure	L1	CO2
	b)	Write the System models: i).context model ii).Behavioral model	L1	CO2
16	a)	Explain clearly about software requirements document	L1	CO2
	b)	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 guide lines 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	a)	Describe architectural architecture styles and patterns.	L1	CO3
	b)	Draw and explain sequence diagrams with an example.	L1	CO3
12	a)	Write a short note on data design.	L1	CO3
	b)	Explain the following diagrams. i).Class diagrams ii)Sequence Diagrams.	L3	CO3
13	a)	Discuss about mapping data flow into software architecture.	L1	CO3
	b)	Explain about conducting component level design.	L1	CO3
14	a)	Define Software architecture. Explain why it may be necessary To design the system architecture before the specifications. Compare function oriented and object-oriented designs	L1	CO3
	b)	Explain the following diagrams. i).Collaboration diagrams ii) Use case diagrams	L3	CO3

15	a)	Describe architectural architecture styles and patterns	L1	CO3
	b)	Write a short note on data design.	L3	CO3
16	a)	Explain the following diagrams. i).Class diagrams ii) Sequence diagrams.	L1	CO3
	b)	Explain the following diagrams. i).Collaboration diagrams ii) Use case diagrams	L1	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	a)	Describe Strategic approach to software testing.	L1	CO4
	b)	Differentiate between black-box and white-box testing.		CO4
12	a)	Explain software quality and metrics for analysis model.	L3	CO4
	b)	What is black box testing Explain.	L1	CO4
13	a)	Discuss about metrics for design model and source code	L2	CO4
	b)	Explain clearly about metrics for software quality	L3	CO4
14	a)	Distinguish between error and failure. Which of the two is detected by testing? Justify	L1	CO4
	b)	Explain how black box testing differs from white box testing.	L1	CO4
15	a)	What are the metrics used for testing? Discuss.	L1	CO4
	b)	Differentiate between black-box and white-box testing.	L3	CO4
16	a)	Describe Strategic approach to software testing.	L1	CO4
	b)	Explain software quality and metrics for analysis model	L1	CO4

UNIT-IV

Risk management

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 m managing software quality?		CO5
6		Write short notes RMMM.	L1	CO5
7		Write short notes RMMM Plan.	L2	CO5
8		Define Risk Refinement.	L2	CO5
9		List the metrics for Design model.	L4	CO5
10		Give the different categories of risks.	L1	CO5
11	a)	Write a detailed note on ISO9000 quality standards	L1	CO5
	b)	RMMM Write short notes.	L1	CO5
12	a)	Discuss about various metrics for software quality.	L1	CO5
	b)	Various metrics for process and products	L2	CO5
13	a)	Explain about formal technical reviews	L2	CO5
	b)	Explain about risk projection and risk management	L1	CO5
14	a)	What do you mean by risk management? Explain how to select the best risk reduction technique when there are many ways of reducing a risk?	L1	CO5
	b)	What types of risks occur during software development? Discuss.	L3	CO5
15	a)	Discuss about various metrics for software quality.	L2	CO5
	b)	Explain about formal technical reviews	L1	CO5
16	a)	Explain the use of Software Reviews	L3	CO5
	b)	Describe the methods for Risk Projection.	L2	CO5