INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)
Dundigal, Hyderabad -500 043

COMPUTER SCIENCE AND ENGINEERING

TUTORIAL QUESTION BANK

Course Title	**SOFTWARE ENGINEERING**				
Course Code	ACS008				
Programme	B.Tech				
Semester	IV	IT			
	V	CSE			
Course Type	Core				
Regulation	IARE - R16				
Course Structure	**Theory**			**Practical**	
	Lectures	**Tutorials**	**Credits**	**Laboratory**	**Credits**
	3	1	4	3	2
Chief Coordinator	Mr. C Raghavendra, Assistant Professor				
Course Faculty	Dr. Y Mohana Roopa, Professor Ms.CH Srividya, Assistant Professor Ms. J Hareesha, Assistant Professor				

COURSE OBJECTIVES:

The course should enable the students to:

I.	Learn how to elicitate requirements and develop software life cycles.
II.	Understand the design considerations for enterprise integration and deployment.
III.	Analyze quality assurance techniques and testing methodologies.
IV.	Understand implementation issues such as modularity and coding standards.
V.	Prepare a project plan for a software project that includes estimates of size and effort, a schedule, resource allocation, configuration control, and project risk.

COURSE OUTCOMES (COs):

I	Identify the approach to risks management through risk identification, risk measurement and risk mitigation.
II	Use the concept of classical analysis to determine the acceptance criteria part of specification
III	Understand the principles of graphical user interface design.
IV	Identify the major differences between white box testing and black box testing.
V	Identify the importance of earned value analysis related to project scheduling and also understand the Various process and project metric used to improve the quality of software.

COURSE LEARNING OUTCOMES (CLOs):

SI. No.	Description
ACS008.01	Understand the key concerns that are common to all software development processes.
ACS008.02	Identify the appropriate process models, approaches and techniques to manage a given software development process.
ACS008.03	Identify the approach to risks management through risk identification, risk measurement and risk mitigation.
ACS008.04	Use the concept of Earned Value Analysis (EVA) to measure the projects progress at any given point in time, forecasting its completion date and final cost, and analyzing variances in the schedule and budget as the project proceeds.
ACS008.05	Memorize project planning activities that accurately help in selection and initiation of individual projects and of portfolios of projects in the enterprise.
ACS008.06	Identify dependability and security issues that affect a given software product.
ACS008.07	Use the concept of classical analysis to determine the acceptance criteria as part of specification.
ACS008.08	Memorize the importance of eliciting the requirements for a software product and translate these into a documented design.
ACS008.09	Understand the concept of data dictionary in order to manage the details in large-scale systems, to locate errors and omissions in the system.
ACS008.10	Understand the concept of petri nets that exhibit concurrency, synchronization and used as a visual communication aid to model the system behavior.
ACS008.11	Memorize the design of object oriented software using with the aid of a formal system modelling notation.
ACS008.12	Learn to model the structure and behavior of a software system.
ACS008.13	Memorize different architectural styles, patterns and architectural mapping using data flow.
ACS008.14	Understand the principles of graphical user interface design.
ACS008.15	Understand the concept of component-level design used to define interface characteristics and communication mechanisms for each software component identified in the architectural design.
ACS008.16	Understand the importance of testing with the performance of root cause analysis.
ACS008.17	Memorize the concepts of software testing approaches such as unit testing and integration testing.
ACS008.18	Understand the approaches to verification and validation including static analysis and reviews.
ACS008.19	Identify the major differences between white box testing and black box testing.
ACS008.20	Understand the importance of refactoring which improves the performance of non-functional attributes of the software.
ACS008.21	Learn to manage time, processes and resources effectively by prioritizing competing demands to achieve personal and team goals.
ACS008.22	Understand the concept of risk management through risk identification, risk measurement and mitigation.
ACS008.23	Memorize the relationship between people and effort.
ACS008.24	Identify the importance of earned value analysis related to project scheduling.
ACS008.25	Use a proactive, structured risk assessment and analysis activity to identify and analyze root causes.
ACS008.26	Possess the knowledge and skills for employability and to succeed in national and international level competitive exams.

TUTORIAL QUESTION BANK

S. No	QUESTION	Blooms Taxonomy Level	Course Outcomes	Course Learning Outcomes
UNIT - I SOFTWARE PROCESS AND PROJECT MANAGEMENT				
Part - A (Short Answer Questions)				
1	Illustrate the characteristics of software	Remember	CO 1	ACS008.01
2	List out the types of software myths?	Remember	CO 1	ACS008.02
3	Discuss the activities that are applicable to all software projects	Understand	CO 1	ACS008.02
4	Illustrate the advantages of software metrics	Remember	CO 1	ACS008.02
5	List out the different layers of software engineering.	Understand	CO 1	ACS008.02
6	Define the process pattern?	Remember	CO 1	ACS008.03
7	List out the types of software process models.	Understand	CO 1	ACS008.03
8	Define various steps involved in identifying a Task Set.	Remember	CO 1	ACS008.03
9	List out common problems involved in software projects	Remember	CO 1	ACS008.05
10	Discuss the template for process patterns.	Remember	CO 1	ACS008.03
11	Describe waterfall model and who invented waterfall model	Understand	CO 1	ACS008.02
12	List the three types of process patterns, with suitable examples.	Remember	CO 1	ACS008.03
13	List different advantages of waterfall model.	Understand	CO 1	ACS008.02
14	Discuss different disadvantages of waterfall model.	Remember	CO 1	ACS008.02
15	Illustrate various problems of prototyping.	Remember	CO 1	ACS008.02
16	Define the use of incremental process model.	Understand	CO 1	ACS008.02
17	List out the disadvantages of spiral model	Understand	CO 1	ACS008.02
18	Discuss about component based development.	Remember	CO 1	ACS008.02
19	Define how software cost is estimated.	Understand	CO 1	ACS008.05
20	What is the use of COCOMO model?	Understand	CO 1	ACS008.05
21	Discuss about project scheduling?	Understand	CO 1	ACS008.05
22	Demonstrate the concept of earned value analysis.	Remember	CO 1	ACS008.04
23	Demonstrate all the applications of software	Remember	CO 1	ACS008.01
24	Write about risk management.	Understand	CO 1	ACS008.05
Part - B (Long Answer Questions)				
1	Explain about evaluation of software engineering methodologies	Remember	CO 1	ACS008.01
2	Define software and explain the various characteristics of software.	Remember	CO 1	ACS008.01
3	Explain “Software myth”? Discuss on various types of software myths and the true aspects of these myths.	Remember	CO 1	ACS008.01
4	Discuss about software Engineering? Explain the layered technology of software engineering.	Understand	CO 1	ACS008.01
5	Describe with the help of the diagram discuss in detail waterfall model. Give certain reasons for its failure.	Understand	CO 1	ACS008.02
6	Explain the use of incremental process model with neat diagram.	Understand	CO 1	ACS008.02
7	Discuss briefly about Evolutionary Process Models with neat diagram.	Remember	CO 1	ACS008.02
8	Explain briefly about the Spiral model with neat sketch.	Understand	CO 1	ACS008.02

9	Describe are the advantages of iterative development? Compare iterative development with Incremental delivery approach	Understand	CO 1	ACS008.02
10	Explain briefly about Component- Based Development model.	Understand	CO 1	ACS008.02
11	Discuss briefly about Aspect-Oriented Software Development model	Remember	CO 1	ACS008.02
12	What is Estimation? Explain its importance with examples.	Understand	CO 1	ACS008.05
13	Explain in detail about LOC-based and FP-based estimation with an example.	Understand	CO 1	ACS008.05
14	Describe COCOMO model and explain its importance.	Understand	CO 1	ACS008.05
15	What is scheduling? Explain the importance of scheduling in software development.	Remember	CO 1	ACS008.04
16	Discuss the importance of earned value analysis	Understand	CO 1	ACS008.04
17	What is risk? Explain about reactive versus proactive risk strategies	Remember	CO 1	ACS008.03
18	Discuss in detail about different software risks.	Understand	CO 1	ACS008.03
19	Describe the use of concurrent development model (or) concurrent engineering model.	Remember	CO 1	ACS008.02
20	Describe the incremental process model advantages and disadvantages with the help of the diagram.	Understand	CO 1	ACS008.04
Part - C (Problem Solving and Critical Thinking Questions)				
1	Explain which software model is suggested if the problem stated by the client have uncertainties which lead to loss if it not planned and solved.	Understand	CO 1	ACS008.02
2	Is it possible to combine process models? If so, provide an example.	Understand	CO 1	ACS008.02
3	What are the advantages and disadvantages of developing software in which quality is “good enough”?	Remember	CO 1	ACS008.02
4	Explain why systems developed as prototypes should not normally be used as production systems.	Understand	CO 1	ACS008.02
5	Try to develop a set of actions for the communication activity. Select one action and define a task set for it.	Understand	CO 1	ACS008.02
6	Explain the evolving role of software and its impact on human life.	Remember	CO 1	ACS008.01
7	Give an examples of software risk and discuss software risk management in detail.	Remember	CO 1	ACS008.02
8	What is software process? Give the importance of process patterns while designing a module.	Understand	CO 1	ACS008.05
9	List and elaborate all the umbrella activities in process framework in detail.	Understand	CO 1	ACS008.02
10	Write the purpose of Software Engineering Institution Capability Maturity Model. Briefly describe all five levels of it.	Understand	CO 1	ACS008.05
UNIT - II REQUIREMENTS ANALYSIS AND SPECIFICATION				
Part – A (Short Answer Questions)				
1	List different kinds of nonfunctional requirements.	Understand	CO 2	ACS008.06
2	What are functional requirements?	Understand	CO 2	ACS008.06
3	What are nonfunctional requirements?	Understand	CO 2	ACS008.06
4	Discuss domain requirements.	Remember	CO 2	ACS008.06
5	Discuss different types of system requirements.	Remember	CO 2	ACS008.06
6	Define functional requirement with an example.	Understand	CO 2	ACS008.07
7	Discuss user requirements in detail.	Understand	CO 2	ACS008.07
8	What is the need for system requirement?	Remember	CO 2	ACS008.07
9	Demonstrate the use of Ethnography technique.	Understand	CO 2	ACS008.08

10	Write a short note on requirement engineering process.	Remember	CO 2	ACS008.08
11	Discuss about requirement discovery	Remember	CO 2	ACS008.08
12	Discuss about Requirements classification and organization.	Understand	CO 2	ACS008.08
13	Compare functional and non-functional requirements.	Remember	CO 2	ACS008.08
14	Discuss about requirement validation?	Understand	CO 2	ACS008.08
15	Define the characteristics of Effective interviewers.	Understand	CO 2	ACS008.08
16	Give an example for requirement validation.	Remember	CO 2	ACS008.08
17	Discuss various types of validation techniques that can be used individually or in conjunction with one another:	Understand	CO 2	ACS008.08
18	Write about Requirements management planning	Remember	CO 2	ACS008.08
19	Discuss about Requirements change management.	Remember	CO 2	ACS008.08
20	What is requirement review?	Understand	CO 2	ACS008.08
21	Discuss data flow model?	Understand	CO 2	ACS008.08
22	Give brief information about data dictionary in the process of requirements analysis, state machine model of a microwave oven?	Remember	CO 2	ACS008.09
23	List the types of behavioral and object models?	Understand	CO 2	ACS008.09
24	List different examples for non-functional requirements.	Understand	CO 2	ACS008.09
25	Write about Structured system analysis	Remember	CO 2	ACS008.09
26	Write about importance of data dictionary in classical analysis.	Understand	CO 2	ACS008.09
27	Discuss about petri nets?	Understand	CO 2	ACS008.10
28	Define feasibility study and list the types.	Understand	CO 2	ACS008.08
29	Illustrate the validation and verification.	Understand	CO 2	ACS008.09
Part - B (Long Answer Questions)				
1	Explain briefly about functional requirements with an example	Understand	CO 2	ACS008.06
2	What is requirement give the measures to validate the requirements of software system?	Remember	CO 2	ACS008.06
3	Discuss in detail about non-functional requirements with an example.	Remember	CO 2	ACS008.06
4	Compare and contrast functional requirements and non-functional requirements.	Understand	CO 2	ACS008.06
5	What are system requirements? Explain in a detail.	Understand	CO 2	ACS008.06
6	Explain briefly about The software requirements document	Remember	CO 2	ACS008.06
7	Discuss about requirement engineering process.	Understand	CO 2	ACS008.07
8	Discuss briefly how requirement validation is done?	Understand	CO 2	ACS008.07
9	Explain how requirements are managed in software project management.	Understand	CO 2	ACS008.08
10	Discuss in detail about requirement discovery with an example.	Understand	CO 2	ACS008.08
11	What is interviewing? Explain different types of interviews.	Remember	CO 2	ACS008.08
12	Write short notes on requirement specification with an example.	Remember	CO 2	ACS008.08
13	Define the importance of natural language specification with an example.	Understand	CO 2	ACS008.08
14	Discuss how requirements are elucidated and validated in software project.	Understand	CO 2	ACS008.08
15	Demonstrate the uses of Use cases in requirements elicitation and analysis with an example.	Remember	CO 2	ACS008.08
16	What is Ethnography? Explain its importance.	Understand	CO 2	ACS008.08
17	Discuss how feasibility studies are important in requirement engineering process.	Remember	CO 2	ACS008.08
18	Why and how requirements validation is done in software development.	Understand	CO 2	ACS008.08

19	What do you mean by structured system analysis? Elaborate.	Understand	CO 2	ACS008.09
20	Discuss in detail the need of petri nets, with an example.	Remember	CO 2	ACS008.10
	Part – C (Problem Solving and Critical Thinking)			
1	Identify various functional and non-functional requirements that may be defined for library based system.	Remember	CO 2	ACS008.06
2	List out user requirements for the following functions a) Cash dispensing function in a bank ATM. b) Spelling check and correcting function in a word processor	Understand	CO 2	ACS008.06
3	Write a set of non-functional requirements for the ticket-issuing system, setting out its expected reliability and response time.	Understand	CO 2	ACS008.06
4	Discuss the functionality of an ATM machine and develop a set of use cases that could serve as a basis for understanding the requirements for an ATM system.	Understand	CO 2	ACS008.09
5	Explain who should be involved in requirements review? Draw a process model showing how a requirements review might be organized.	Understand	CO 2	ACS008.10
6	Define Data dictionary. Give the importance of data dictionary with a suitable example.	Understand	CO 2	ACS008.09
7	What is requirement? Explain about user requirements with an example.	Understand	CO 2	ACS008.06
8	Explain the software requirement analysis and the importance of software specification of requirements	Understand	CO 2	ACS008.08
9	Justify the role of documentation in software development. Prove how it is important in software development?	Understand	CO 2	ACS008.06
10	Design class hierarchy for library by using inheritance model? Describe in brief.	Remember	CO 2	ACS008.09
	UNIT-III SOFTWARE DESIGN			
	Part – A (Short Answer Questions)			
1	What are the elements of design model?	Remember	CO 3	ACS008.11
2	List the principles of a software design**.**	Understand	CO 3	ACS008.11
3	Describe about software quality guidelines	Understand	CO 3	ACS008.11
4	How do we assess the quality of a software design	Remember	CO 3	ACS008.11
5	What characteristics are common to all design methods?	Understand	CO 3	ACS008.11
6	Write a short note on Abstraction.	Understand	CO 3	ACS008.11
7	Discuss the importance of design pattern	Remember	CO 3	ACS008.11
8	Write about the modularity in design concepts.	Understand	CO 3	ACS008.11
9	Discuss the concept of Information Hiding and Functional Independence.	Remember	CO 3	ACS008.11
10	Discuss the importance of refactoring in software design.	Understand	CO 3	ACS008.12
11	Write a short note on design classes in software design.	Understand	CO 3	ACS008.12
12	Discuss about interface design elements in the design model	Remember	CO 3	ACS008.12
13	Write short notes on component level and deployment level design elements	Remember	CO 3	ACS008.12
14	Write short notes on architectural descriptions.	Remember	CO 3	ACS008.13
15	Demonstrate about representing the system in context	Understand	CO 3	ACS008.13
16	Write a short notes on architectural mapping using data flow	Understand	CO 3	ACS008.13
17	Describe design is important in software engineering	Remember	CO 3	ACS008.11
18	Discuss analysis and design model	Understand	CO 3	ACS008.11
19	What are the common activities in design process?	Understand	CO 3	ACS008.11

20	Discuss the characteristics of good interface design	Understand	CO 3	ACS008.14
21	Demonstrate the importance of user analysis	Remember	CO 3	ACS008.14
22	Discuss about Use cases and Task elaboration	Remember	CO 3	ACS008.14
23	Write short notes on Workflow analysis	Understand	CO 3	ACS008.14
24	Define various User interface design steps	Understand	CO 3	ACS008.14
25	Write any three user interface design issues	Remember	CO 3	ACS008.14
26	List out the golden rules for interface design	Understand	CO 3	ACS008.14
27	What is a component?	Understand	CO 3	ACS008.15
28	What belongs to a component according to object oriented view	Remember	CO 3	ACS008.15
29	List any two basic design principles that are applicable to component- level design	Understand	CO 3	ACS008.15
30	What should we consider when we name components?	Remember	CO 3	ACS008.15
31	Write a short notes on cohesion	Remember	CO 3	ACS008.15
32	What is coupling? Explain different categories of coupling	Understand	CO 3	ACS008.15
33	List out the steps for conducting component level design	Remember	CO 3	ACS008.15
34	Discuss the importance of graphical design notation in designing class based components	Understand	CO 3	ACS008.15
35	List the various steps to develop a decision table.	Understand	CO 3	ACS008.15
36	What is program design language? Discuss in detail.	Remember	CO 3	ACS008.15
37	Why are control components necessary in traditional software and generally not required in object-oriented software?	Remember	CO 3	ACS008.15
38	What is user interface design	Understand	CO 3	ACS008.14
Part – B (Long Answer Questions)				
1	Explain about the various design concepts considered during design	Understand	CO 3	ACS008.11
2	Discuss briefly the following fundamental concepts of software design: i) Abstraction ii) Modularity iii) Information hiding.	Remember	CO 3	ACS008.11
3	Illustrate the importance of design classes. Explain different types design classes.	Remember	CO 3	ACS008.11
4	Discuss in detail about architectural design elements and interface design elements.	Understand	CO 3	ACS008.11
5	Explain the importance of component level design and deployment level design elements.	Understand	CO 3	ACS008.11
6	What is software architecture? Why it is important explain with an example.	Understand	CO 3	ACS008.12
7	Explain briefly about transform mapping with an example	Understand	CO 3	ACS008.12
8	Demonstrate the importance of Archetypes with an example.	Remember	CO 3	ACS008.12
9	Discuss in detail about different architectural styles.	Remember	CO 3	ACS008.13
10	Demonstrate how a system represent in architectural context with an example.	Remember	CO 3	ACS008.13
11	Discuss the importance of user interface design in sale of software	Understand	CO 3	ACS008.14
12	Explain briefly about the importance of task analysis and modeling.	Remember	CO 3	ACS008.14
13	Discuss in detail about user interface design patterns with an example.	Remember	CO 3	ACS008.14
14	Explain briefly about different common design issues in user interface design.	Understand	CO 3	ACS008.14
15	List the basic design principles for designing class based components.	Remember	CO 3	ACS008.15
16	What is Cohesion? Explain its importance in designing class based components.	Understand	CO 3	ACS008.15

17	Discuss in detail about Coupling and also explain different categories of Coupling.	Remember	CO 3	ACS008.15
18	Compare and contrast Coupling and Cohesion in designing class based components.	Understand	CO 3	ACS008.12
19	What are the characteristics of a good design? Describe different types of coupling and cohesion.	Remember	CO 3	ACS008.15
20	What is meant by cohesion? How software should be designed considering cohesion?	Understand	CO 3	ACS008.15
Part – C (Problem Solving and Critical Thinking)				
1	Illustrate in detail about taxonomy of software design in the design of user interface	Understand	CO 3	ACS008.11
2	Describe the design pattern that you encounter in a category of everyday things.	Understand	CO 3	ACS008.12
3	Explain the examples of three data abstractions and the procedural abstractions that can be used to manipulate them.	Understand	CO 3	ACS008.13
4	Demonstrate the architecture of a house or building as a metaphor, Draw comparison with software architecture. How are the disciplines of classical architecture and software architecture similar? How do they differ?	Understand	CO 3	ACS008.15
5	State how do we assess quality of a software design?	Understand	CO 3	ACS008.11
6	Explain briefly about the design process and also explain its characteristics.	Understand	CO 3	ACS008.11
7	Explain data architectural and procedural design for a software	Understand	CO 3	ACS008.11
8	Describe about graphical design notation in designing traditional components.	Remember	CO 3	ACS008.15
9	Explain the necessary steps to build decision table in designing traditional components.	Understand	CO 3	ACS008.15
10	Discuss briefly about the golden rules for the user interface design.	Understand	CO 3	ACS008.14
UNIT-IV TESTING AND IMPLEMENTATION				
1	What are the approaches of integration testing	Understand	CO 4	ACS008.16
2	Define various test characteristics.	Remember	CO 4	ACS008.16
3	Write short notes on internal and external views of testing.	Understand	CO 4	ACS008.16
4	What is white box testing?	Understand	CO 4	ACS008.16
5	Discuss the importance of graph matrices in basis path testing.	Remember	CO 4	ACS008.16
6	Write the different steps that can be applied to derive the test cases.	Understand	CO 4	ACS008.16
7	What is loop testing? Write a short notes on loop testing.	Understand	CO 4	ACS008.16
8	Define condition testing and data flow testing.	Remember	CO 4	ACS008.16
9	What are the differences between verification and validation?	Understand	CO 4	ACS008.18
10	Demonstrate about boundary value analysis in black box testing.	Remember	CO 4	ACS008.19
11	Discuss in detail about graph-based testing methods.	Remember	CO 4	ACS008.19
12	What is regression testing?	Understand	CO 4	ACS008.19
13	Write short notes on unit testing and explain its environment.	Understand	CO 4	ACS008.17
14	What is the use of integration testing? Explain its types.	Remember	CO 4	ACS008.17
15	Discuss about alpha and beta testing.	Understand	CO 4	ACS008.18
16	Define stress and performance testing.	Understand	CO 4	ACS008.18
17	Describe about debugging process.	Remember	CO 4	ACS008.18
18	Write short notes on coding practices.	Understand	CO 4	ACS008.20
19	What are the characteristics of testability?	Understand	CO 4	ACS008.16

20	Give a note on role of testing in software development	Understand	CO 4	ACS008.16
	Part – B (Long Answer Questions)			
1	Explain the integration testing process and system testing process and discuss their outcomes	Understand	CO 4	ACS008.17
2	Discuss the importance of test strategies for conventional software.	Understand	CO 4	ACS008.17
3	Compare and contrast black box testing and White Box testing.	Understand	CO 4	ACS008.19
4	Discuss in detail about basis path testing and explain its importance.	Remember	CO 4	ACS008.16
5	Explain briefly about control structure testing.	Understand	CO 4	ACS008.16
6	What is system testing? Explain briefly about system testing.	Understand	CO 4	ACS008.19
7	Discuss in detail about the art of debugging.	Remember	CO 4	ACS008.19
8	Demonstrate the importance of validation testing?	Understand	CO 4	ACS008.18
9	Write short notes on regression and white box testing.	Remember	CO 4	ACS008.19
10	Explain about various software implementation techniques.	Understand	CO 4	ACS008.20
11	What is testing? Discuss in detail about Black-Box testing.	Remember	CO 4	ACS008.19
12	What are the various testing strategies to software testing? Discuss them briefly	Remember	CO 4	ACS008.19
13	Discuss the conditions exists after performing validation testing?	Remember	CO 4	ACS008.18
14	Give a note on smoke testing. Illustrate the benefits of smoke testing?	Understand	CO 4	ACS008.16
15	Define various debugging strategies. Explain the importance of refactoring technique in software implementation.	Understand	CO 4	ACS008.20
16	Describe the role of exhaustive testing in software development.	Remember	CO 4	ACS008.17
17	Why testing is required in software development? Describe alpha and beta testing with suitable example.	Understand	CO 4	ACS008.19
18	Write a short note on automated testing	Understand	CO 4	ACS008.18
19	Write the goals of testing. Describe good testing habits.	Remember	CO 4	ACS008.17
20	Briefly explain the methods for estimating number of bugs.	Understand	CO 4	ACS008.19
	Part – C (Problem Solving and Critical Thinking)			
1	Discuss software failures and faults? What are test coverage criteria? Discuss testing issues	Understand	CO 4	ACS008.16
2	Develop a complete test strategy for the Safe Home system.	Understand	CO 4	ACS008.16
3	Using your own words, describe the difference between verification and validation.	Remember	CO 4	ACS008.18
4	Is unit testing possible or even desirable in all circumstances? Provide examples to justify your answer.	Remember	CO 4	ACS008.18
5	Who should perform the validation test the software developer or the software user? Justify your answer.	Understand	CO 4	ACS008.16
6	How to fix a bug? Explain how to estimate number of bugs?	Understand	CO 4	ACS008.16
7	What is grey box testing? How it is differ from other testing methods?	Remember	CO 4	ACS008.20
8	Describe the role of acceptance testing in modern software development methodology.	Remember	CO 4	ACS008.17
9	Explain component interface testing with suitable example.	Understand	CO 4	ACS008.19
10	Fixing bugs is dangerous. Why?	Understand	CO 4	ACS008.18
	UNIT-V PROJECT MANAGEMENT			
	Part - A (Short Answer Questions)			
1	List out the importance of cost estimation in software development	Understand	CO 5	ACS008.21
2	Give an example of LOC-based cost estimation	Remember	CO 5	ACS008.21
3	Write short notes on estimation.	Remember	CO 5	ACS008.21

4	Discuss about outsourcing.	Remember	CO 5	ACS008.21
5	What is planning? Write about project planning process.	Understand	CO 5	ACS008.21
6	Write a short note on COCOMO II model.	Remember	CO 5	ACS008.21
7	Discuss about proactive risk strategies.	Understand	CO 5	ACS008.22
8	Demonstrate various types of software risks.	Understand	CO 5	ACS008.22
9	Write a short note on risk identification.	Remember	CO 5	ACS008.22
10	How overall project risk will be assessed?	Understand	CO 5	ACS008.22
11	What is risk projection (or) risk estimation?	Remember	CO 5	ACS008.22
12	Elaborate the RMMM.	Remember	CO 5	ACS008.22
13	Discuss about software project scheduling.	Understand	CO 5	ACS008.24
14	What are the basic principles of software project scheduling?	Remember	CO 5	ACS008.24
15	Define the relationship between people and effort.	Remember	CO 5	ACS008.23
16	How should effort be distributed across the software process workflow?	Understand	CO 5	ACS008.23
17	Discuss about time-line charts with an examples.	Understand	CO 5	ACS008.24
18	Write a short note on earned value analysis.	Understand	CO 5	ACS008.24
19	Determine process metrics and software process improvement	Remember	CO 5	ACS008.25
20	Illustrate the various metrics for software quality.	Understand	CO 5	ACS008.24
21	Write a short notes on FP-based cost estimation	Remember	CO 5	ACS008.21
22	What is meant by software change	Understand	CO 5	ACS008.24
Part - B (Long Answer Questions)				
1	Explain in detail about Reactive versus Proactive Risk Strategies	Understand	CO 5	ACS008.22
2	Write briefly about Risk mitigation, monitoring, and management.	Remember	CO 5	ACS008.22
3	What is scheduling? Explain the importance of scheduling in the project management.	Remember	CO 5	ACS008.24
4	Discuss the importance of project scheduling.	Understand	CO 5	ACS008.24
5	Write about how to define a task set for the software project.	Remember	CO 5	ACS008.24
6	How the risk identification in done in risk management.	Remember	CO 5	ACS008.22
7	Compare the pros and cons of COCOMO and COCOMO II Models?	Understand	CO 5	ACS008.23
8	Explain in detail about software measurement and discuss various metrics.	Remember	CO 5	ACS008.21
9	Explain the process of integrating metrics within the software process.	Remember	CO 5	ACS008.21
10	Discuss in detail about various metrics for small organizations.	Understand	CO 5	ACS008.21
11	Explain the need for software measures and describe various metrics	Remember	CO 5	ACS008.21
12	Discuss the five essential elements of software project management	Remember	CO 5	ACS008.22
13	Explain risk management process with a neat sketch.	Remember	CO 5	ACS008.22
14	What is the difference between private and public uses for software metrics?	Understand	CO 5	ACS008.23
15	What guidelines should be applied when we collect software metrics?	Remember	CO 5	ACS008.21
16	With a neat sketch explain software metric collection process.	Remember	CO 5	ACS008.22
17	How should we derive a Set of “simple” software metrics?	Understand	CO 5	ACS008.23
18	What is an indirect measure, and why are such measures common in software metrics work?	Remember	CO 5	ACS008.21
19	How do we size the software that we are planning to build?	Remember	CO 5	ACS008.22
20	What do LOC and FP based estimation have in common?	Understand	CO 5	ACS008.23
Part – C (Problem Solving and Critical Thinking)				
1	Describe the difference between “known risks” and “predictable risks.”	Understand	CO 5	ACS008.22

2	Describe five software application areas in which software safety and hazard analysis would be a major concern.	Understand	CO 5	ACS008.22
3	Describe the software change management system in detail	Understand	CO 5	ACS008.22
4	How should we use metrics during the project itself? Describe establishing a metric approach with real time scenario.	Remember	CO 5	ACS008.21
5	List any four types of risks and explain each of it with suggestable example.	Remember	CO 5	ACS008.22
6	What are the risks may arise in recruitment problems, organizational financial problems? Describe suitable strategies which helps to manage the risk.	Understand	CO 5	ACS008.22
7	How do we compute the expected value for software size?	Remember	CO 5	ACS008.21
8	List and explain any four factors which affecting software pricing.	Remember	CO 5	ACS008.22
9	Draw a neat sketch for the project planning process and project scheduling process.	Understand	CO 5	ACS008.24
10	Why is it difficult to develop on estimation technique using use cases.	Understand	CO 5	ACS008.22

Prepared By: Mr. C Raghavendra, Assistant Professor.
Department of Computer Science and Engineering

HOD, CSE