INSTITUTE OF AERONAUTICAL ENGINEERING
(Autonomous)
Dundigal, Hyderabad - 500 043

COMPUTER SCIENCE AND ENGINEERING(AI&ML)

QUESTION BANK

Department	**COMPUTER SCIENCE AND ENGINEERING(AI&ML)**				
Course Title	**OBJECT ORIENTED SOFTWARE ENGINEERING**				
Course Code	ACSC19				
Program	B.Tech				
Semester	VI	CSE(AI&ML)			
Course Type	Core				
Regulation	IARE - UG20				
Course Structure	Theory			Practical	
	Lecture	Tutorials	Credits	Laboratory	Credits
	3	1	4	-	-
Course Coordinator	Mr R A V Krishna Rao, Assistant Professor				

COURSE OBJECTIVES:

The students will try to learn:

I	The object-oriented concepts along with their applicability contexts.
II	The different phases in software development life cycle.
III	The modeling techniques to model different perspectives of object oriented software design.
IV	The software architecture and design patterns.
V	The knowledge of testing methods and comparison of various testing techniques.

1 COURSE OUTCOMES:

After successful completion of the course, students should be able to:

CO 1	**Identity** software process software development process models and application to manage a software project.	Understand
CO 2	**Outline** the software requirements prototyping scheduling estimation models to prepare the software requirement specifications document.	Understand
CO 3	**Make use of** discrete modelling techniques to conduct structured object-oriented and domain analysis.	Apply
CO 4	**Utilize** the object -oriented analysis process and explore different design models with UML.	Apply
CO 5	**Explain** the design concept principles and various design approaches.	Understand
CO 6	**Summarize** the approaches used for object-oriented implementation testing and maintenance of a software product.	Understand

QUESTION BANK:

Q.No	QUESTION	Taxonomy	How does this subsume the level	CO's
MODULE I				
INTRODUCTION TO SOFTWARE ENGINEERING				
PART A-PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS				
1	Develop a set of actions for the communication activity. Select one action and define a task set for it	Understand	The learner will try to **Explain** the actions for the communication activity	CO 2
2	Describe Is it possible to combine process models? If so, provide an example	Remember	-	CO 2
3	List the advantages and disadvantages of developing software in which quality is —good enough	Remember	–	CO 1
4	Explain why systems developed as prototypes should not normally be used as production systems	Understand	The learner to **define** system developed prototypes and know the concept of the production system	CO 2

5	List the prescriptive software development process models. Explain the incremental process model with neat diagram	Understand	The learner know the Component Based Development model	CO 1
6	List out any three specialized process model. Explain the component based development process model with their goals, advantages and routines	Understand	The learner know the Software Engineering A Layered Technology	CO 1
7	Distinguish between process and project metrics.Give examples? What is defect classification? How can an organization make use of this metrics for its process improvement?	Understand	The learner know the Activities of a Generic Process Framework	CO 1
8	Summarise the necessity of different process models? Describe the process model you would adopt for the car manufacturing project and justify your choice with its advantages and disadvantages	Understand	The learner know the Task Set for Elicitation	CO 1
9	State the needs for metrics in software engineering.Explain ,how software quality in assured through software metrics	Understand	The learner know the Prototyping	CO 1
10	Describe project management? List and explain the principles related to software project management related to a project	Understand	The learner know the Specialized Process Models	CO 1
PART-B LONG ANSWER QUESTIONS				
1	Illustrate about Software Engineering Paradigm in detail	Understand	The learner to know about the types of software engineering paradigm	CO 2
2	Explain the Process in Software Engineering.	Understand	The learner first to know the concept of process	CO 2

3	Discuss about the issues/problems in OOSE	Understand	The learner to know about the types of issues in object oriented software engineering	CO 2
4	Discuss about any two software process models	Understand	The learner to know about the types of software process model	CO 2
5	Write in detail about Project Management	Understand	The learner first to know the concept of project management	CO 2
6	Outline the metrics of Project? Explain it with examples	Remember	-	CO 2
7	Outline the metrics of Process? Explain it with example	Understand	The learner first to know the concept of metrics of process	CO 2
8	List the principles of OOSE with its concepts	Understand	The learner to know about the principles of OOSE	CO 2
9	Discuss how OOSE differs from SE	Understand	The learner to know about the OOSE and software engineering	CO 1
10	Explain waterfall model and apllications of waterfall model in software engineering.	Understand	The learner first to know the concept of waterfall mode	CO 2
11	Discuss the template for process patterns	Remember	-	CO 1
12	Explain briefly about the Spiral model with neat sketch	Understand	The learner the concept of the Spiral model	CO 2
13	List different advantages of waterfall model	Understand	The learner first to know the advantages of waterfall model	CO 2
14	Discuss different disadvantages of waterfall model	Remember	-	CO 2
15	Discuss about software Engineering? Explain the layered technology of software engineering	Remember	The learner to define software Engineering and know the concept of the layered technology of software engineering	CO 1
16	List out the disadvantages of spiral model	Understand	The learner first to know the disadvantages of spiral model	CO 2

17	Define how software cost is estimated	Understand	The learner first to know the disadvantages of spiral model	CO 2
18	Eloborate the use of COCOMO model	Understand	The learner to know the use of COCOMO model	CO 2
19	Describe with the help of a diagram, explain in detail waterfall model. Give certain reasons for its failure	Understand	The learner to know the concept of waterfall model	CO 1
20	Discuss —Software myth? Discuss on various types of software myths and the true aspects of these myths	Remember	-	CO 2
PART-C SHORT ANSWER QUESTIONS				
1	Define software engineering. Differentiate between process and project	Remember	–	CO 4
2	Explain Water-fall model with a neat diagram	Remember	–	CO 4
3	Outline the imporatce of spiral model?	Understand	The learner to know about the concepts of spiral model	CO 4
4	Distinguish between process and methods.	Understand	The learner to know about the concepts of process and methods	CO 4
5	Give the importance of software engineering	Remember	-	CO 3
6	Discuss about software process	Remember	-	CO 2
7	Explain agile development	Remember	–	CO 3
8	Demonstrate all the applications of software	Remember	-	CO 3
9	Define project and process	Remember	-	CO 3
10	Explain project management	Remember	-	CO 3
11	List out the principles and methodologies	Understand	The learner to know about the types of methodologies and principles	CO 3
12	List out the types of software myths	Remember	-	CO 1
13	List out all the umbrella activities in process framework	Understand	The learner to recall the concept of activities that are applicable to all software projects	CO 1

14	List out the different layers of software engineering	Understand	The learner to recall the concept of different layers of software engineering	CO 1
15	Explain waterfall model and who invented waterfall model	Understand	The learner first to know the concept of waterfall model	CO 1
16	List out the advantages of waterfall model	Understand	The learner first to know the advantages of waterfall model	CO 1
17	List out the disadvantages of waterfall model	Remember	-	CO 1
18	Define the use of incremental process model	Understand	The learner first to know the use of incremental process model	CO 1
19	List out the disadvantages of spiral model	Understand	The learner first to know the disadvantages of spiral model	CO 1
20	Discuss about component based development	Remember	-	CO 1
MODULE II				
PLANNING AND SCHEDULING				
PART-A PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS				
1	Identify various functional and non functional requirements that may be defined for library based system?	Remember	The learner to know about the types of system requirements	CO 3
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	Remember	-	CO 3
3	Write a set of non-functional requirements for the ticket-issuing system, setting out its expected reliability and response time..	Understand	The learner to Know the concept of nonfunctional requirements	CO 3

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	Remember	-	CO 3
5	Explain who should be involved in requirements review? draw a process model showing how a requirements review might be organized.	Understand	The learner must know the concepts of requirements review	CO 4
6	Explain software requirements engineering process. Outline the importance of feasibility study in generating the feasibility report for an assigned project	Understand	The learner must know the concepts of requirements requirements engineering process	CO 3
7	Define risk management. Discuss about various types of Software Risks identified during software development	Rememberd	The learner must know the concepts of risk management	CO 3
8	Compare and contrast between reactive risks and proactive risks with suitable example. Discuss the need for risk identification.	Remember	-	CO 3
9	Define software requirement. Explain the importance of software requirements document in a project with suitable example	Remember	The learner must know the concepts of risk management	CO 3
10	Define cost estimation. Discuss the importance of constructive cost estimation model II under project estimation.	Understand	The learner must know the concepts of cost estimation	CO 3
PART-B LONG ANSWER QUESTIONS				
1	Explain about SRS and how it is made. Brief with the template	Remember	-	CO 3

2	Explain about Throw-away Software Prototyping	Understand	The learner to know the concept of Throw-away Software Prototyping	CO 4
3	Explain about Evolutionary Software Prototyping	Understand	The learner know the concept of Evolutionary Software Prototypinge	CO 4
4	Explain the methodologies in Object Oriented Estimation	Understand	The learner to know about the types of methodologies in object oriented software Estimation	CO 1
5	Discuss the techniques in Rapid Prototyping? Explain them in detail	Understand	The learner to know about the types of techniques in Rapid Prototypingi	CO 3
6	Define process? Sketch the process of Incremental development process	Understand	The learner to know the concept of process of Incremental development process	CO 1
7	Write in detail about Object Oriented approach for Scheduling	Understand	The learner to know about the types of software process models	CO 1
8	Describe the activities associated with project planning. Explain	Understand	The learner first to know the concept of project planning	CO 4
9	Differentiate Problem-based estimation and Process-based estimation	Understand	The learner first to know the concept of Problem-based estimation	CO 4
10	Explain in detail about Estimation for Software Projects	Understand	The learner first to know the concept of The learner first to know the concept of Software Projects	CO 4
11	Process-Based Estimation Vs Tool-Based Estimation. Explain	Understand	The learner to know the concept of Process-Based Estimation and Tool-Based Estimations	CO 1
12	List out the Scope and Resources on Software Estimation	Understand	The learner to know the concept of Scope and Resources on Software Estimation	CO 4
13	List different kinds of nonfunctional requirements	Remember	-	CO 4
14	List and explain the steps in Risk Management Process	Apply	The learner to know the concept of Risk Management Process	CO 4

15	What are the Eight Reasons for Late Software Delivery? Discuss	Understand	The learner to know the concept of Reasons for Late Software Delivery	CO 4
16	List out the principles of Project Scheduling and discuss about it in brief	Understand	The learner to know the concept of principles of Project Scheduling	CO 4
17	Write short notes on requirement specification with an example	Remember	The learner first to know the concept requirement specification	CO 3
18	Explain nonfunctional requirements	Understand	The learner to know the concept of nonfunctional requirements	CO 3
19	Demonstrate the use of Ethnography technique	Understander	The learner to explain about requirement validation	CO 3
20	Explain the need for system requirement	Remember	-	CO 3
21	Discuss how feasibility studies are important in requirement engineering process	Remember	-	CO 3
22	Explain briefly about The software requirements document	Remember	-	CO 3
23	What are system requirements? Explain in a detail	Understander	The learner to **recall**the system requirements	CO 3
24	What is requirement? Explain about user requirements with an example	Understand	The learner to know the concepts of functional requirements	CO 3
PART-C SHORT ANSWER QUESTIONS				
1	Discuss different types of system requirements	Understand	The learner to know about the types of system requirements	CO 3
2	What are functional requirements	Understand	The learner to know the concept of functional requirements	CO 3
3	Explain nonfunctional requirements.	Understand	The learner to know about the concepts of non-functional requirements	CO 4
4	Discuss domain requirements.	Remember	-	CO 3

5	Describe the software prototyping.	Remember	-	CO 3
6	Explain software project planning.	Remember	-	CO 4
7	Define Scope?	Remember	–	CO 4
8	List out the resources .	Remember	–	CO 4
9	Define software estimation.	Remember	-	CO 3
10	Define risk. What is risk identification? Explain in detail..	Remember	-	CO 4
11	Discuss user requirements in detail?	Understand	The learner to explain the user requirements	CO 4
12	Explain the need for system requirement	Understand	The learner to know the concept of system requirements	CO 4
13	Discuss about requirement validation.	Remember	-	CO 4
14	List out the empirical estimation models.	Remember	-	CO 4
15	List the different techniques used in data transformation.	Remember	-	CO 4
16	Define planning.	Remember	-	CO 4
17	What is scheduling? Explain the importance of scheduling in software development.	Remember	-	CO 4
18	Define how software cost is estimated.	Understand	The learner to know the concept software cost is estimated	CO 4
19	Write about risk management.	Understand	-	CO 4
20	Illustrate various problems of prototyping.	Remember	-	CO 4
MODULE III				
ANALYSIS				
PART A-PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS				
1	Define transform mapping? Explain the process with an illustration. What is its strength and weakness?	Understandr	The learner to know the concepts of transform mapping	CO 4

2	Discuss about frequent item set? Write the Apriori algorithm for frequent item set generation? Explain with an example	Understand	The learner to know about design pattern	CO 5
3	Explain the examples of three data abstractions and the procedural abstractions that can be used to manipulate them	Understand	The learner to know about variations and effectiveness of data abstractions and the procedural abstractions	CO 4
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	The learner to justify that How are the disciplines of classical architecture and software architecture similar	CO 3
5	Why are control components necessary in traditional software and generally not required in object-oriented software.	Remember	The learner to define the analysis and design model	CO 3
6	Explain the state oriented approaches for representing behavioral specifications of software.	Understand	The learner to know about behavioral specifications of software	CO 3
7	Construct dynamic model diagram, comprising of state transition diagrams	Understand	The learner to know about dynamic model diagram	CO 3
8	Explain in detail about the characteristics and criteria for a good design.	Understand	The learner to know about History of Object Relational Data Model	CO 3
9	Draw the basic structure of analysis model and explain each entity in detail.	Understand	The learner to know about characteristics and criteria for a good design	CO 3
10	Describe various prototyping techniques and discuss on analysis sand modeling	Understand	The learner to know about analysis sand modeling	CO 5
PART-B LONG ANSWER QUESTIONS				
1	Write in detail about Object Model and its relationship	Remember	-	CO 3

2	Explain about Design concepts for Modular Design	Understand	The learner to know about the Design concepts for Modular Design	CO 3
3	Explain the steps in effective Modular Design	Remember	-	CO 4
4	Explain in detail about Flow-oriented Modeling and Behavioral Modeling	Understand	The learner to know about the concepts of Flow-oriented Modeling and Behavioral Modeling	CO 3
5	Explain in detail about Design Concepts and Principles	Understand	The learner to know about the concepts of Design Concepts and Principles	CO 4
6	Explain the techniques in Domain Analysis	Understand	The learner to know about the types of techniques in Domain Analysis	CO 3
7	Brief about Structured Analysis vs Object Oriented Analysis	Understand	The learner to know about the concepts of Structured Analysis vs Object Oriented Analysis	CO 3
8	Explain in detail about Object Design Process	Understand	The learner to know about the concepts of Object Design Process	CO 3
9	Explain in detail about Design Patterns	Understand	The learner to know about the concepts of Design Patterns	CO 4
10	Write about importance of data dictionary in classical analysis	Understand	-	CO 3
11	Why are control components necessary in traditional software and generally not required in object-oriented software	Remember	The learner to define the analysis and design model	CO 4
12	Disadvantages of Object Oriented Analysis	Remember	The learner to define the object oriented analysis	CO 3
13	advantages of Object Oriented Analysis	Remember	The learner to define the object oriented analysis	CO 3
14	Disadvantages of Structured Analysis	Remember	The learner to define the structured analysis	CO 3
15	advantages of Structured Analysis	Remember	The learner to define the structured analysis	CO 3
16	advantages of object relational model	Remember	The learner to define the object relational model	CO 5

17	disadvantages of object relational model	Remember	The learner to define the object relational model	CO 5
18	Identifying Events with the Use Case	Remember	The learner to define the Events with the use case	CO 5
19	What are system requirements? Explain in a detail.	Understand	The learner to recall the system requirements	CO 2
20	What is requirement? Explain about user requirements with an example	Understand	The learner to know the concepts of functional requirements	CO 5
PART-C SHORT ANSWER QUESTIONS				
1	Define Analysis modeling	Rememberd	-	CO 3
2	Define data modeling	Rememberd	-	CO 3
3	Define functional modeling	Remember	-	CO 3
4	Define information flow	Remember	-	CO 3
5	Describe behavioral modeling	Remember	-	CO 3
6	What is the structured analysis	Remember	-	CO 3
7	Discuss object oriented analysis	Remember	-	CO 3
8	What is domain analysis	Remember	-	CO 3
9	List out the design modeling with UML	Remember	-	CO 3
10	Write about Structured system analysis	Remember	-	CO 3
11	List kinds of behavioral and object models	Understand	The learner to explain the Capability Maturity Model	CO 3
12	Discuss data flow model	Understand	The learner to know the concepts of software processl	CO 3
13	Design class hierarchy for library by using inheritance model	Remember	-	CO 3
14	What do you mean by structured system analysis? Elaborate	Understand	The learner to define the structured system analysis	CO 3
15	Discuss analysis and design model	Understand	The learner to know about concept of software design	CO 3
16	How do we assess the quality of a software design	Remember	-	CO 4
17	List kinds of behavioral and object model	Understand	The learner to explain the Capability Maturity Model	CO 3

18	Discuss data flow model	Understand	The learner to know the concepts of software process	CO 3
19	Write short notes on Workflow analysis	Understand	-	CO 3
20	What do you mean by structured system analysis? Elaborate	Understand	The learner to define the structured system analysis	CO 5
MODULE IV				
DESIGN				
PART A- PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS				
1	What are the characteristics of a good design? Describe different types of coupling and cohesion. How design evaluation is performed?	Understand	The learner to **recall** the characteristics of a good design	CO 4
2	What are the various software architectures available for the developer according to you? Which is the best and why?	Understand	Learner to know the concepts ofsoftware architectures	CO 4
3	List the different type of architecture styles and describe the data centered and object oriented architecture with necessary diagram	Remember	-	CO 4
4	Discuss various design concepts related to software design. Explain in detail about designing class based components.	Remember	-	CO 4
5	Explain the importance of traditional components and discuss data centered architectural style with suitable example.	Remember	-	CO 4
6	Explain about user interface design. Discuss various architectural styles and architectural patterns with suitable example.	Remember	-	CO 4

7	What do you mean by modularity in software development? Why is it needed? What is its strength?	Remember	-	CO 2
8	**Explain** with neat sketch Wing control and Canard Control	Understand	The learner will try to **recall** the concept of stability of missile and then **explain**s the concept of wing and canard configuration with a neat sketch	CO 4
9	Elucidate briefly how boat tail configuration reduces aerodynamic drag of a missile	Understand	The learner will try to **recall** the concept of drag force acting on missile and then **explain**s the concept of boat tail configuration in reducing the drag with a neat sketch	CO 5
10	Write down advantages and applications of homing guidance system over other systems	Understand	The learner will try to **recall** the working principle of homing guidance systems and then **explain** the advantages and its applications	CO 5
PART-B LONG ANSWER QUESTIONS				
1	Explain in detail about Design Patterns	Understand	The Learner to know about the Design Patterns	CO 5
2	Explain in detail about Scenario-based Modeling	Understand	The Learner to know about the Scenario-based Modeling	CO 6
3	Explain in detail about Class-based Modeling	Remember	-	CO 3
4	Explain in detail about Object Design Process	Remember	-	CO 3
5	Brief about Structured Analysis vs Object Oriented Analysis	Understand	The Learner to know about the Structured Analysis vs Object Oriented Analysis	CO 3
6	Explain the techniques in Domain Analysis	Understand	The Learner to know about the Domain Analysis	CO 3
7	Explain the steps in effective Modular Design	Understand	The Learner to know about the effective Modular Design	CO 4

8	Explain about Design concepts for Modular Design	Understand	The Learner to know about the e Design concepts for Modular Design	CO 3
9	Write in detail about Object Model and its relationship	Understand	The learner to know the concepts of Object Model and its relationship	CO 3
10	Explain the phases in Structured Analysis	Understand	The learner to know the concepts of Object Model and its relationship	CO 3
11	Explain in detail about Design Concepts and Principles	Understand	The learner to know the concepts of Design Concepts and Principles	CO 4
12	Define state diagram? Sketch an example to explain state diagram	Understand	The learner to know the concepts of state diagram	CO 3
13	Define Analysis? Elements of the analysis model	Understand	The learner to know the concepts of Analysis model	CO 3
14	Define flow-oriented elements	Understand	The learner to know the concepts of Flow oriented elements	CO 3
15	Define cardinality? Explain with example	Understand	The learner to know the concepts of cardinality	CO 4
16	Define structured analysis? What are the structured analysis tools explain	Understand	The learner to know the concepts of structured analysis tools	CO 3
17	Describe basic the elements of DFD? What are the structured analysis tools explain	Understand	The learner to know the concepts of the elements of DFD	CO 3
18	Define user object model? Create user object model diagram	Understand	The learner to know the concepts of user object model	CO 3
19	Describe the Interface design elements	Understand	The learner to know the concepts Interface design elements	CO 4
20	Discuss the Architectural design elements	Understand	The learner to know the concepts Architectural design elements	CO 4
PART C - SHORT ANSWER QUESTIONS				
1	Elaborate Design principles	Understand	The Learner to know about the white box testing	CO 5
2	Define Design concepts	Remember	—	CO 5
3	Define principles	Remember	—	CO 5

4	Define design process	Remember	—	CO5
5	Explain modular design	Understand	The learner to define the modular design	CO 5
6	Explain design effective modularity	Understand	The learner to define design effective modularity	CO 5
7	Define software architecture	Remember	—	CO 5
8	Define data design	Remember	-	CO 5
9	Describe transform mapping	Remember	–	CO 5
10	Define transaction mapping	Remember	—	CO 5
11	Define object oriented design	Remember	—	CO 5
12	Define the system design process	Remember	—	CO 5
13	Write a short note on earned value analysis	Understand	The learner to recall the earned value analysis	CO 5
14	Explain briefly about the importance of task analysis and modeling	Remember	-	CO 5
15	List kinds of behavioral and object models	Understand	The learner to explain the Capability Maturity Model	CO 5
16	Discuss the importance of earned value analysis	Understand	The learner to know the importance of earned value analysis	CO 5
17	Discuss briefly about Aspect-Oriented Software Development model	Remember	-	CO 5
18	Describe the use of concurrent development model (or) concurrent engineering model	Understand	The learner to recall the the advantages of iterative development and know the difference between iterative	CO 5
19	Discuss the Component-level design elements	Understand	The learner to recall the the Component-level design elements	CO 5
20	Describe A Brief Taxonomy of Architectural Styles	Understand	The learner to recall the the Taxonomy of Architectural Styles	CO 4
MODULE V				
IMPLEMENTATION, TESTING AND MAINTENANCE				
PART A-PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS)				
1	Describe the differences between —known risks and —predictable risks	Understand	The learner to identify the known risks and predictable risks	CO 6

2	The learner to identify the known risks and predictable risks	Apply	The learner to know the concepts of software application	CO 2
3	Describe the Software Testing Fundamentals	Understand	The learner to know the concepts Software Testing Fundamentals	CO 6
4	Discuss the Internal and External Views of Testing	Understand	The learner to know the concepts Internal and External Views of Testing	CO 6
5	Discuss about the Basis Path Testing	Understand	The learner to know the concepts the Basis Path Testing	CO 6
6	Describe the Graph-Based Testing Methods	Understand	The learner to know the concepts the Graph-Based Testing Methods	CO 6
7	Define Regression testing When to use Regression testing it	Understand	The learner to know the conceptsof the Regression testing	CO 6
8	What are the Advantages and disadvantages of Regression testing	Understand	The learner to know the concepts of the Regression testing	CO 6
9	Discuss about the Non-incremental Integration Testing and Incremental Integration Testing	Understand	The learner to know the concepts the Non-incremental Integration Testing and Incremental Integration Testing	CO 6
10	Describe briefly Bottom-up Integration and top-down Integration	Understand	The learner to know the concepts Bottom-up Integration and top-down Integration	CO 6
PART-B LONG ANSWER QUESTIONS				
1	Write the process related to Maintenance Testing	Understand	The learner to recall the concept of process related to Maintenance Testing	CO 6
2	How Preventive maintenance differ from adaptive maintenance. Explain	Understand	The learner to recall the concept of Preventive maintenance	CO 6
3	What are the types of Maintenance Testing? Explain	Apply	The learner to know about the types of Maintenance Testing	CO 6

4	Explain in detail about Maintenance Testing with its Pros and Cons	Understand	The learner to **recall** the concept of Maintenance Testing with its Pros and Cons	CO 6
5	Explain the Activities in Maintenance	Understand	The learner to recall the concept of Activities in Maintenance	CO 6
6	Write in brief about Black box testing techniques	Understand	The learner to know about the types of techniques	CO 6
7	Write in brief about White box testing techniques	Understand	The learner to recall the concept of White box testing techniques	CO 6
8	List and brief about levels of Testing in detail	Remember	-	CO 6
9	Discuss about the Challenges in Software Implementation	Understand	The learner first to know the concept of Challenges in Software Implementation	CO 6
10	Explain about Object oriented testing strategies in details	Understand	The learner to recall the concept of different Object oriented testing strategies	CO 6
11	Explain about Top-Down Implementation and Testing with diagram	Understand	The learner first to know the concept of Top-Down Implementation and Testing	CO 6
12	Explain about Bottom-Up Implementation and Testing with diagram	Understand	The learner first to know the concept Bottom-Up Implementation and Testing	CO 6
13	Explain about object oriented product Implementation and Integration	Understand	The learner first to know the concept object oriented product Implementation and Integrationg	CO 6
14	How OOP helps in Implementation and Testing process	Remember	-	CO 6
15	Describe How OOA and OOD models helps while Testing a software	Understand	The learner first to know the OOA and OOD models	CO 6
16	Explain about Cyclomatic Complexity with an example	Understand	The learner first to know the use of Cyclomatic Complexity	CO 5
17	Differentiate Control flow testing and Data flow testing	Understand	The learner first to know the concept of Control flow testing and Data flow testing	CO 6

18	Differentiate Verification and Validation with v-shaped mode	Understand	The learner first to know the concept of Verification and Validation with v-shaped mode	CO 6
19	Define Regression Testing and how it differ from Retesting	Understand	The learner first to know the concept of Regression Testing and how it differ from Retesting	CO 6
20	Explain How Preventive maintenance differ from adaptive maintenance	Understand	The learner first to know the concept of Preventive maintenance and adaptive maintenance	CO 6
PART-C SHORT ANSWER QUESTIONS				
1	What is white box testing	Understand	The Learner to know about the white box testing	CO 6
2	Demonstrate about boundary value analysis in black box testingl	Remember	—	CO 6
3	Write short notes on unit testing and explain its environment	Understand	The Learner to know about the unit testing	CO 6
4	What is the use of integration testing? Explain its types	Remember	—	CO 6
5	What is black box testing	Remember	—	CO 6
6	List out the Software testing methods	Remember	-	CO 6
7	Define basis path	Remember	-	CO 6
8	Describe the control structure	Remember	–	CO 6
9	Illustrate validation testing	Understand	The Learner to know about the validation testing	CO 6
10	Define system testing	Remember	-	CO 6
11	DList out the testing tools	Remember	-	CO 6
12	Write short notes on internal and external views of testing	Understand	The Learner to know about the internal and external views of testing	CO 6
13	Discuss the importance of graph matrices in basis path testing	Remember	-	CO 6

14	Explain different steps that can be applied to derive the test cases	Understand	The learner to recall the different steps that can be applied to derive the test cases	CO 6
15	What are the differences between verification and validation	Understand	The learner to know the concept of verification and validation	CO 6
16	Write short notes on coding practices	Understand	The learner to recall the characteristics of testability	CO 6
17	What is object oriented product	Remember	-	CO 6
18	Define software implementation	Remember	-	CO 6
19	Define integration in software implementation	Remember	-	CO 6
20	Define software maintenance and reengineering	Remember	-	CO 6

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