

Department of Information Technology
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Question Bank- EVEN Semester

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Handled & Prepared by	Ms.PONNI.J,A.P(O.G) [J.P] & Ms.R.SARANYA,A.P(O.G) [R.S]

UNIT-I

PART-A

Q.No	Question	Competence	BTL
1	Define Software Architecture.	Remembering	BTL1
2	Why is Software Architecture important?	Understanding	BTL2
3	Compare System Architecture and Software Architecture.	Analyzing	BTL4
4	Classify the Architectural Structures.	Analyzing	BTL4
5	Show the diagrammatic representation of common Software Architectural Structures.	Applying	BTL3
6	Interpret the uses of Decomposition.	Understanding	BTL2
7	List out Kruchten's four views.	Remembering	BTL1
8	"Structures give different views but they are not Independent". Justify.	Evaluating	BTL5
9	What is Software Process?	Remembering	BTL1
10	List the activities involved in creating software architecture.	Remembering	BTL1
11	Give the role of stakeholders.	Understanding	BTL2
12	Classify the classes of influence that come from the developing organization.	Applying	BTL3
13	"Architecture is high level design"-Justify	Evaluating	BTL5
14	Which structure is used to eliminate deadlock and reduce bottlenecks? How?	Analyzing	BTL4

15	What is architecture business cycle? List out the major parts.	Remembering	BTL1
16	Illustrate architectural pattern with suitable example.	Applying	BTL3
17	Give the three broad types of decision that architecture design involves.	Understanding	BTL2
18	Describe the technical constraints for programming language.	Remembering	BTL1
19	Generalize the features of process recommendations.	Creating	BTL6
20	Prepare a different definition of software architecture such that it abstracts information away from the system and yet provide enough information to be basis for analysis, decision making and risk reduction.	Creating	BTL6

PART –B

Q.No	Question	Competence	BTL
1	How does the nature of your organization affect the architectures that develop? How do the architectures affect the nature of the organizations?	Creating	BTL6
2	i) Discuss how the software architecture affects the factors of influence. ii) Differentiate functional and non functional requirements.	Understanding	BTL2
3	Describe the technical importance of software architectures. Further elaborate on the fact that architecture is a vehicle for stakeholder communication.	Understanding	BTL2
4	What allocation structure is as applied to software architectures? Explain three allocation structures in practice.	Remembering	BTL1
5	Explain in detail the building of Architecture Business Cycle.	Analyzing	BTL4
6	Describe the quality attributes in various categories.	Remembering	BTL1
7	Explain the various process recommendations as used by an architect while developing software architectures.	Analyzing	BTL4
8	Describe the common Software Architecture Structures with neat diagram.	Remembering	BTL1
9	Relate the structures to each other and explain kruchten's four views in detail.	Applying	BTL3
10	Software architecture is often compared to building architecture. What are the strong points of this comparison? What is the correspondence in buildings to software architecture structures and views? What is the weakness of this comparison? When does it breakdown?	Evaluating	BTL5

UNIT-II

PART-A

Q.No	Question	Competence	BTL
1	Distinguish between availability scenario and modifiability scenarios.	Understanding	BTL2
2	List the six parts of scenarios.	Remembering	BTL1
3	What is a quality attribute scenario?	Remembering	BTL1
4	What is functionality?	Remembering	BTL1
5	Infer the problems in system quality attributes.	Analyzing	BTL4
6	What do you mean by interoperability?	Remembering	BTL1
7	Give the two concerns of modifiability scenario.	Understanding	BTL2
8	List the attributes related to portability.	Remembering	BTL1
9	Classify the usability scenario categories.	Applying	BTL3
10	What does the response measures for testability deal with?	Analyzing	BTL4
11	Is it reasonable to create own scenario? Formulate with suitable example.	Creating	BTL6
12	Show the pictorial representation for goal of availability tactics.	Applying	BTL3
13	Recommend the widely used tactics for recognizing faults.	Evaluating	BTL5
14	Differentiate Testability and Usability tactics.	Understanding	BTL2
15	Differentiate Active and Passive redundancy.	Understanding	BTL2
16	Point out the steps for recovering from attacks.	Analyzing	BTL4
17	Generate scenarios for the business and architectural qualities. Which qualities are difficult to capture with scenarios.	Creating	BTL6
18	Differentiate fault and failure.	Remembering	BTL1
19	Classify the various types of dependencies that one module can have on another which forms the basis for prevention of ripple effect.	Applying	BTL3
20	Summarize the importance of documenting quality attributes.	Evaluating	BTL5

PART –B

Q.No	Question	Competence	BTL
1	What is a quality attribute scenario? List the parts of such scenario. Explain.	Remembering	BTL1
2	a) Explain how faults are detected and prevented. b) Write a brief note on design time and run time tactics.	Analyzing	BTL4
3	Usability is not always given due consideration in architecture design, making usability system goals often difficult to achieve because they are treated as an afterthought. Think of a system where you are familiar with the architecture and try to enumerate the usability tactics, if any, it has employed.	Creating	BTL6
4	What is the goal of modifiability tactics? Discuss the modifiability tactics in detail.	Understanding	BTL2
5	Explain the following with respect to tactics: i) Fault recovery ii) Internal monitoring iii) Resource arbitration iv) Resisting attacks.	Analyzing	BTL4
6	Write note on i) Software quality attributes ii) Problems in system quality attributes iii) Goals of business qualities iv) Architectural qualities.	Remembering	BTL1
7	Define Quality Attribute Workshop .Write in detail about the steps involved in QAW.	Remembering	BTL1
8	Explain six part scenarios in detail.	Evaluating	BTL5
9	Classify the various tactics being used and tabulate how they help to achieve quality attributes in detail.	Applying	BTL3
10	Discuss the concept of documenting quality attributes.	Understanding	BTL2

UNIT-III

PART-A

Q.No	Question	Competence	BTL
1	What do you interpret from the term “4+1” view model?	Understanding	BTL2
2	Define Views and how will you represent.	Remembering	BTL1
3	Give example for Logical View.	Understanding	BTL2
4	Compare Physical view and Development view.	Evaluating	BTL5
5	State few benefits and limitations of Viewpoints.	Remembering	BTL1
6	Differentiate view and viewpoint.	Analyzing	BTL4
7	When will you say that the views are consistent?	Analyzing	BTL4
8	Classify the types of inconsistent views.	Applying	BTL3
9	Classify the critical roles played by Scenario view point in 4+1 view model.	Analyzing	BTL4
10	Show the three step procedure to choose a view.	Applying	BTL3
11	Illustrate the different kinds of views.	Applying	BTL3
12	What is a called a view packet?	Remembering	BTL1
13	Summarize the characteristics of the classes of logical architecture.	Evaluating	BTL5
14	What are the two strategies available to analyze the level of concurrency in 4+1 view model?	Remembering	BTL1
15	Give the significance of SEI model.	Understanding	BTL2
16	Give the usage of operational view point.	Understanding	BTL2
17	Mention the styles used for logical view and development view.	Remembering	BTL1
18	How the 4+1 view is seen by the software industry? Generate the scenarios that are considered difficult and easy.	Creating	BTL6
19	What is called an architectural element?	Remembering	BTL1
20	Compose any two UML notations for module view type.	Creating	BTL6

PART –B

Q.No	Question	Competence	BTL
1	Explain 4+1 View Model of Architecture with a diagram in detail.	Analyzing	BTL4
2	a) What are views? How they serve the architecture with examples? b) List the steps in documenting a view for architecture.	Remembering	BTL1
3	Explain views with reference to concept, choosing the view and its documentation.	Analyzing	BTL4
4	Discuss the various notations available to represent various views.	Understanding	BTL2
5	Discuss Siemens 4 views in detail.	Understanding	BTL2
6	Write in detail about the various architectural perspectives.	Remembering	BTL1
7	Compare view and viewpoint with its advantages and disadvantages.	Evaluating	BTL5
8	Illustrate the types of views with suitable examples.	Applying	BTL3
9	What is View Point? Describe the six core viewpoints in detail.	Remembering	BTL1
10	Prepare a case study on your own for choosing the views.	Creating	BTL6

UNIT-IV

PART-A

Q.No	Question	Competence	BTL
1	Define architectural style and architectural pattern.	Remembering	BTL1
2	List common architectural style.	Remembering	BTL1
3	Point out the pros and cons of Pipes and Filters.	Analyzing	BTL4
4	Show the strength and weakness of Repositories.	Applying	BTL3
5	What are the three major parts of Blackboard model?	Understanding	BTL2
6	List the two important aspects of objects.	Remembering	BTL1
7	What is the side effect of using objects?	Understanding	BTL2
8	Illustrate an example for state transition architecture.	Applying	BTL3
9	Mention the variations in data flow systems.	Remembering	BTL1
10	Compare open loop and closed loop systems.	Evaluating	BTL5
11	What is heterogeneous architecture? Classify their styles.	Analyzing	BTL4
12	Summarize the properties of model view controller.	Evaluating	BTL5
13	Give the applications for Batch sequential systems.	Understanding	BTL2
14	What is Call-and-Return Styles? List their types.	Remembering	BTL1
15	Give merits and demerits of Shared data.	Understanding	BTL2
16	Compare Batch sequential style and Pipe-and-Filter Style.	Analyzing	BTL4
17	Prepare a sketch to represent Main-Program-and-Subroutine architecture, Layered architecture, Object Oriented architecture.	Creating	BTL6
18	Define code on demand.	Remembering	BTL1
19	Illustrate Event style with example and highlight its importance.	Applying	BTL3
20	A remote procedure call is indistinguishable from standard main program and subroutine systems – Generalize.	Creating	BTL6

PART –B

Q.No	Question	Competence	BTL
1	Define architecture style. Tabulate the summary of all architectural styles.	Remembering	BTL1
2	Consider the case study of building software controlled mobile robot. Describe its challenging problems and design considerations with four requirements. Finally give the solution by layered architecture for all the four requirements.	Creating	BTL6
3	Discuss the importance and advantages of the architectural styles with reference to an appropriate application area.	Understanding	BTL2
4	a) Write a note on heterogeneous architectures. b) Discuss the invariants, advantages and disadvantages of pipes and filters architectural style.	Understanding	BTL2
5	Explain Shared information styles in detail with neat diagram.	Evaluating	BTL5
6	Describe all the types of Call-and-return style with neat sketch.	Remembering	BTL1
7	Explain Implicit invocation style with neat diagram.	Analyzing	BTL4
8	Describe the various Data flow styles with suitable examples.	Remembering	BTL1
9	Illustrate the forces that influence the solutions to the problems based on blackboard pattern.	Applying	BTL3
10	Analyze a case study. Pinpoint its problem and Implement solution for the same using each style.	Analyzing	BTL4

UNIT-V

PART-A

Q.No	Question	Competence	BTL
1	Point out the advantages and disadvantages of ADL.	Analyzing	BTL4
2	Express the objectives of formal methods.	Understanding	BTL2
3	List the properties that ADL should exhibit.	Remembering	BTL1
4	List the pros and cons of UML as an ADL.	Remembering	BTL1
5	List the rules for sound documentation.	Remembering	BTL1
6	How do ADL differ from programming languages?	Analyzing	BTL4
7	What is cloud computing? List the various services provided by them.	Remembering	BTL1
8	What are the pitfalls in Informal description?	Remembering	BTL1
9	Show the significance of SOA.	Applying	BTL3
10	State the need for formal languages.	Remembering	BTL1
11	Differentiate Open and closed systems.	Understanding	BTL2
12	Give the uses of architectural documentation.	Understanding	BTL2
13	How control, relationships and data are indicated in visual notation?	Analyzing	BTL4
14	Classify the fundamental capabilities of ACME.	Applying	BTL3
15	Show the different perspectives of a system defined by UML.	Applying	BTL3
16	What do you meant by view template and view catalog?	Understanding	BTL2
17	Compare ADL with other Programming Languages.	Evaluating	BTL5
18	Which UML diagrams are examples of behavioral descriptions? Justify with an example.	Evaluating	BTL5
19	Compose the steps to create your own Web service.	Creating	BTL6
20	Design a template for documenting a view using UML.	Creating	BTL6

PART –B

Q.No	Question	Competence	BTL
1	Discuss about documenting the views using UML with suitable diagram.	Understanding	BTL2
2	What are the suggested standard organization points for view documentation?	Remembering	BTL1
3	What are the options for representing connectors and systems in UML?	Remembering	BTL1
4	Explain the various types of ADL in detail.	Evaluating	BTL5
5	Illustrate Architectural Description Languages with suitable example.	Applying	BTL3
6	i) Analyze need for formal languages? ii) Point out the Merits and Demerits of Visual languages	Analyzing	BTL4
7	Explain the good practices in documenting software architecture.	Analyzing	BTL4
8	i) Define Cloud computing. Explain its types and uses in detail. ii) Write a note on Service Oriented Architecture.	Remembering	BTL1
9	Discuss Adaptive structures in detail.	Understanding	BTL2
10	You are a new hire to a project layout a sequence of documentation you would like to have to acquaint you with your new position.	Creating	BTL6