

VALLIAMMAI ENGINEERING COLLEGE
S.R.M. Nagar, Kattankulathur
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sub Code : CP7007 Sub Name: SOFTWARE REQUIREMENTS ENGINEERING
Branch / Year : ME CSE / I Year Staff in charge: Dr.V.Dhanakoti

QUESTION BANK - CP7007-SOFTWARE REQUIREMENTS ENGINEERING

UNIT- I -DOMAIN UNDERSTANDING

PART - A

1. Define requirements engineering.
2. What are the different types of requirement?
3. State the difference between Functional, nonfunctional and domain requirement.
4. Define requirements Specification.
5. Define Requirements engineering processes.
6. Define elicitation and analysis.
7. What are the problems of requirement analysis?
8. Define Ethnography.
9. Define Requirements checking.
10. What are the requirements validation techniques?
11. What exactly is a Test Requirement?
12. Define business modeling.
13. Define use cases.
14. What is the purpose of fishbone diagrams?
15. State the advantages and disadvantages of fishbone diagrams.
16. Define solution system boundary.
17. Define UML activity diagram

18. Define validation and verification.
19. What is business process modeling?
20. What is process mapping, Why and when it is used.

PART – B

1. Explain about Fish bone diagram.
2. Explain Business Process modeling with help of use cases and notations.
3. Discuss about Requirements and design and there test cases (with diagram).
4. Explain about Requirements engineering process and its types.
5. Explain Verification and Validation with proper example.
6. Explain Test Case Requirements with proper example.
7. Explain Business modeling for Bank ATM Transaction with use case diagram.
8. Explain UML Use Case Driven Approach for Requirements Engineering.
9. Explain Test Requirements, Test Cases and Procedures.
10. Discuss about Requirements analysis, design and Process with an example.

UNIT-2

REQUIREMENTS ELICITATION

PART - A

1. Write about stakeholder management and its building blocks?
2. Identify possible stakeholders in the following system:

A train protection system which will automatically bring the train to a halt if it exceeds the speed limit for a track segment or if it goes through a red signal
3. Mention some flaws that might be in questionnaires?
4. Mention the elicitation techniques that followed in software requirements?
5. What is the importance of stakeholder management?

6. What are the four phases followed in interviewing?
7. Define Brainstorming?
8. Define requirement Elicitation and mention its process?
9. Define stakeholder inputs, outputs, tools and Techniques?
10. What are the process tasks needed in stakeholder identification?
11. Define stack holders?
12. Define prototyping and explain its pros and cons?
13. What are the key components of an interview?
14. Write short on Goldsmith problem pyramid.
15. Define Basic Rules for Questionnaire Item Construction.
16. Explain Throwaway prototyping.
17. Explain Evolutionary prototyping.
18. Briefly explain about Nominal Group Technique in Brainstorming.
19. Briefly explain about Team Idea Mapping Method.
20. Define Primary, Secondary and Key stakeholders.

PART - B

1. Explain detail about elicitation techniques with pros and cons?
2. With library management system as a case study, explain how the needs of stakeholders can be understood and documented?
3. Briefly state the difficulties involved in requirements elicitation. Suggest guidelines to overcome these difficulties?
4. Briefly explain stakeholder expectations questionnaire with real time example?
5. Explain about Elicitation techniques interviews, questionnaire and prototyping.
6. Write about stakeholders with proper Example?

7. Briefly explain about Stakeholder Analysis and their Needs.
8. Explain about Software Prototyping and its types.
9. Briefly explain about Documenting Stakeholders' Needs.
10. Explain about Elicitation techniques workshop, brainstorming and prototyping

UNIT-3

FUNCTIONAL REQUIREMENTS

PART – A

1. Define UML.
2. What are the Elements of a Use Case?
3. Explain basic UML symbols with explanations.
4. Explain include relationship and extend relationship.
5. Explain flow of controls with any one example.
6. Explain Misuse case.
7. Explain System Description Document Template.
8. What are the questions to be answered before going for tool shopping?
9. What is National Widgets?
10. What are the Risk Factors in Order Processing System?
11. Draw the Order Processing Architecture.
12. Explain the Flow of Events.
13. Explain Alistair Cockburn Approach.
14. Define an Actor.
15. Explain Martin Fowler Approach.
16. Write Short notes on Version Control.
17. Write short notes on Change Control.

18. What is a Baseline?
19. What is Control Hierarchy?
20. List out atleast four characteristics of good UML Diagram.

PART – B

1. Define Use case based Requirements.
2. Explain detail about documenting Use cases.
3. Explain Order Processing System with a neat example and diagram.
4. Features of Use cases and their scenarios.
5. Explain SRS documents (with diagram).
6. With help of USE Case diagram build Library Management System.
7. With help of USE Case diagram build Bank System.
8. With help of USE Case diagram build Railway Reservation.
9. With help of USE Case diagram build Website Development.
10. With help of USE Case diagram build Electricity Payment Systems.

UNIT – IV

QUALITY ATTRIBUTES AND USER EXPERIENCE

PART – A

1. Distinguish between system architecture and software architecture.
2. Define QAW
3. List out the steps involved in QAW
4. What are the ways to specify UI design
5. Mention the important quality attributes for medical imaging system.

6. Name the common system quality attributes.
7. List out the quality attribute scenarios.
8. What are the elements of user experience design
9. Define process and product quality with example.
10. Explain metrics and its types.
11. Mention any four barriers in achieving quality.
12. Write a short note on Buildability.
13. Explain usability and list out its factors.
14. Explain in short about risk management in a project.
15. Explain the term Availability, Modifiability, Portability, Recoverability.
16. What are the Pros and Cons of Usability Requirements?
17. Define Quality?
18. Explain the word Stimulus and Artifact.
19. What are the Barriers to Achieving Quality?
20. List some basic characteristics of The ISO/IEC 9126 Standard.

PART – B

1. Explain in detail about Quality attribute workshop (QAW).
2. Explain about six part scenarios of Quality Attribute Requirements.
 - i) Write a short note on usability requirements
 - ii) With mobile device as a case study, model the user experience.
3. Explain about Quality attributes and Eliciting quality attributes.
4. Write a short note on User Interface design.
5. Briefly explain the quality attributes scenarios.
6. Write a short notes on Documenting quality attributes

7. Explain in details about Quality attribute workshop (QAW)
8. Explain Quality attributes and Eliciting quality attributes.
9. Explain usability requirements, its components and its need.
10. Create a User experience Model for Purchase of Books Online.

UNIT V

MANAGING REQUIREMENTS

PART – A

1. What is Requirements Management?
2. List the Types of requirement.
3. Define software requirement metrics.
4. What is meant by managing changes?
5. Define Project Scope.
6. Define Product Scope.
7. Define Scope creep.
8. What is meant by Context Diagram?
9. List and explain two types of building blocks.
10. Write about Active and Passive external entities.
11. Define Cooperative and Autonomous.
12. Explain about Alternatives of the system context diagram.
13. Write about Requirements Activities.
14. Define Investigation and Feasibility.
15. Explain about Traceability.
16. Define Product metric
17. Define the term Knot in a graph.

18. Write short notes on Halstead's Product Metrics.
19. Write short notes Quality Metrics.
20. What are major steps of Requirements Management Process?

PART – B

1. Define scope of the project and requirement properties.
2. Explain in detail about context diagram and its alternatives.
3. a) What is meant by managing changes.
b) Define the Types of requirement and Traceability.
4. Explain in detail about managing requirement.
5. Explain about software Requirements metrics and management Tools.
6. Explain Traceability and management tools.
7. Explain different types of Metric with proper example.
8. Briefly explain the Requirement Product Metrics in depth.
9. Explain the attributes in SRS and the metric for it.
10. What are the Characteristics of a Good Requirement?