

**ST.JOSEPH'S COLLEGE OF ARTS & SCIENCE, (AUTONOMOUS)**

**CUDDALORE-1.**

**P.G. and Research Department of Computer Science**

<b>Class : III – CSDB</b>	<b>Subject Code : ECS615S</b>
<b>Semester : VI</b>	<b>Subject Title : Software Engineering</b>
<b>Name of Teacher : T. MIRANDA LAKSHMI</b>	

**UNIT I (5Marks)**

1. Define Software Engineering. List out its characteristics (or) what is computer software? What are its characteristics?
2. Briefly explain the management myth in software engineering?
3. Discuss briefly about the RAD model and also state its drawbacks?
4. Write short notes on the following.
  - a. Prototyping model. (2.5 )
  - b. Concurrent development model. (2.5)
5. Explain the software prototyping model and state its advantages and disadvantages?
6. List out the various task regions of the spiral model.
7. With a sketch, explain the concurrent development model.
8. Explain about the Waterfall model with a neat diagram?

**Unit I (10 Marks)**

9. Explain the major activities carried out in Spiral model with a neat diagram?
10. Write note on the following with suitable diagram.

i) The incremental Model      ii) The RAD Model

11. Explain the different phases involved in waterfall life cycle with suitable diagram.
12. Explain process models in detail and explain any 2 in detail.

**UNIT II (5 Marks and 10 Marks)**

13. What are the tasks involved in Requirement Engineering?
14. Explain about the Elicitation work products in requirements engineering?
15. List out the guidelines for collaborative requirements gathering.
16. What is quality function deployment and explain the three types of requirements that it identifies.
17. Write a brief note on initiating the requirement engineering process.

### **UNIT III (5 Marks)**

18. Briefly explain any three rules of thumb in requirement analysis?
19. What is the purpose of Domain analysis? also write the input and output for the domain analysis?
20. List the concepts of Data Modeling.
21. Define i) Cardinality ii) Attributes and iii) Modality.
22. Explain the process of Creating Behavioral Model.
23. What is meant by software domain analysis?
24. Explain flow oriented modeling.

### **UNIT III (10 Marks)**

25. Discuss the requirement analysis.
26. Write an algorithm and draw the flowchart for finding the biggest of three numbers. Draw the flow graph and determine the total number of test cases to be designed to verify and validate the same.
27. How does analysis model act as roadmap to design model? Explain
28. Explain the class-based modeling with an example.
29. Give a detailed account on any three data modeling concepts.
30. Compare Flow Oriented modeling with class based modeling.

### **UNIT IV (5 Marks)**

31. What is testing? Write down any three testing principles.
32. List out the software testing fundamentals and characteristics.
33. Give the test strategies for conventional software.
34. Explain validation testing with the approaches.
35. Briefly explain the 3 ways of computing the cyclomatic complexity of a graph?
36. Write short notes on
  - a. Unit testing. (2.5)
  - b. System Testing. (2.5)

### **Unit IV (10 Marks)**

37. Discuss the various control structures in testing?
38. Write short notes on.
  - a. Flow graph notation. (5 marks)

- b. Equivalence partitioning. (5 marks)
39. Discuss in detail the top-down and bottom-up integration testing?
  40. Write short notes on.
    - a. Basis path testing. (5)
    - b. Boundary value analysis. (5)
  41. Compare and contrast the black box and white box testing methods?

#### **Unit V (5 Marks)**

42. How the people plays an important role in the Project Management.
43. Briefly explain the process decomposition?
44. Write a short note on team organization.
45. Briefly explain any three teams of the management spectrum in project management?

#### **Unit V (10 Marks)**

46. Discuss the 4P's of management spectrum (OR) Discuss briefly about the management spectrum in project management? (OR) Explain the project management for The People, The Product and The Process.
47. Briefly explain the people needed for the project management? (OR) Briefly explain the people most important for a successful software project?
48. How the product is to be viewed and treated in project management?
49. Describe the process and the technical reviews involved in Project Management.
50. Write a detailed account on Formal technical reviews.

**Subject:** Software Engineering  
**Class :** III CSDA , III CSEA  
**Year :** 2017-2018

**Subject Code:** ECS615S  
**Staff Name:** A.R.Johnson Durai

## UNIT I

### *Five Mark Questions*

1. Define Software and mention the characteristics of software.
2. What is Software Engineering and explain about Software Myths.
3. Discuss Incremental Model with suitable Diagrams.
4. Explain the RAD model.
5. With a sketch, explain the concurrent development model.

### *Ten Mark Questions*

6. Explain the different phases involved in waterfall life cycle with suitable diagram.
7. Give the steps involved in the prototyping Model.
8. Explain the Spiral model.

## Unit-II

### *Five Mark Questions*

1. How to initiate the Requirement Engineering Process?

### *Ten Mark Questions*

2. What are the tasks involved in Requirement Engineering?
3. Explain about the Eliciting the Requirement Engineering Process in detail

### **Unit-III**

#### **Five Mark Questions**

1. Write short note on Requirement Analysis Model
2. List the concepts of Data Modeling.

#### **TEN Mark Questions**

3. Explain Flow Oriented Modeling concepts in details.
4. Describe the Classed Based Modeling with example.
5. How to create Behavioral Model?

### **Unit-IV**

#### **Five Mark Questions**

1. What is testing? Write down any three testing principles.
2. How verification differs from validation?
3. Discuss in detail the top-down and bottom-up integration testing?
4. Describe the process for control structure testing.
5. Compare and contrast white box testing with black box testing.

#### **TEN Mark Questions**

6. Give the test strategies for conventional software.
7. Explain black box testing and its types in detail
8. Explain white Box Testing and its types in detail.

### **Unit-V**

**Five Mark Questions**

1. Write a short note on team organization.
2. Briefly explain the people needed for the project management?
3. List and explain the four P's for an effective software project Management.
4. Explain about the Formal Technical Reviews in Management Spectrum

**TEN Mark Questions**

5. Explain the role of Management Spectrum.
6. Describe the process and the technical reviews involved in Project Management.