

## IMPORTANT TOPICS

### MODULE 1:

1. software engineering ethics
2. Waterfall, incremental, Boehm's spiral model
3. Software validation
4. Prototyping
5. Agile software development -methods-manifesto - values and principles
6. Case studies(both)

### MODULE 2:

1. Functional and non functional Requirements (differences)
2. Requirement engineering process
3. Requirements elicitation and validation
4. Traceability matrix
5. Personas, Scenarios, userstories and feature identification
6. Design Process
7. Architectural design styles
8. Component level design main points
9. Case study

### MODULE 3:

1. Object oriented design using UML
2. Design patterns
3. Open source licensing-GPL, LGPL, BSD
4. Informal and formal technical reviews
5. Postmortem evaluations
6. Software testing strategies-unit, integration, validation, system, white box, path, control structure testing
7. Difference btw whitebox and blackbox testing
8. Debugging
9. Devops main pts only
10. CI/CD/CD

### MODULE 4:

1. Risk management
2. Managing people
3. Project planning
4. Project scheduling
5. Agile planning
6. Estimation TECHNIQUES-COCOMO 1 and COCOMO 2 Problems
7. Configuration, version and change management
8. SCRUM framework-kanban methodology and lean approaches

### MODULE 5

1. software quality dilemma
2. Achieving software quality elements
3. SQA tasks
4. SPI process and CMMI process
5. everything as a service(IaaS, PaaS, SaaS)

## 6. Microservices architecture

### Problems

1. Flowgraph problems
2. cocomo 1 and 2 problems