

SOFTWARE ENGINEERING AND PROJECT MANAGEMENT 21CS61**ALL FOR 10 MARKS SCORING PACAKGE****MODULE 1**

- 1) Define Software Engineering. List and explain the unique characteristics of web applications that differentiate them from traditional software applications.
- 2) With a neat diagram, explain the phases of a generic process model for software development.
- 3) Describe the main features of Evolutionary process models and how they handle changing requirements.
- 4) Discuss the myths of software engineering and provide examples to illustrate each myth.
- 5) Demonstrate the waterfall model spiral and model with real time example
- 6) Explain characteristics that differentiate WebApps from other software.
- 7) Discuss the David Hooker's seven principles of software engineering practice.

MODULE 2

- 1) Describe the process of eliciting requirements in software engineering. What techniques can be used to gather requirements effectively?
- 2) Sketch up the Swimlane diagram and describe how it works for online access to security cameras.
- 3) Explain the concept of Building the Requirement Model
- 4) Develop a UML use case diagram for making a withdrawal at an ATM activity
- 5) Explain the steps to be followed for validating requirements in detail.

MODULE 3

- 1) Explain the concept of agility in software development. Discuss how agile methodologies aim to reduce the cost of change in software development. What practices help to flatten the cost curve?**
- 2) Explain the principles that guide each framework Activity.**
- 3) Illustrate the concepts of extreme programming (XP) with its functional diagram**
- 4) Explain how the fundamental ideas of the framework may be used in any software process.**
- 5) Explain Adaptive Software Development (ASD) Model with sketch.**
- 6) What is design modelling? Explain design modelling principles.**

MODULE 4

- 1) Discuss the various types of contracts used in project management and their implications for project execution.**
- 2) Explain the concepts of management control in project management and describe some tools and techniques used for effective management control.**
- 3) List and describe the core activities covered by software project management.**
- 4) Describe the software project management life cycle and explain how it differs from traditional project management practices.**
- 5) Explain the software development life cycle with block diagram**
- 6) List the characteristics of projects and show the differences between Contract management and project management**
- 7) Discuss the ways of categorizing the software projects with real time examples.**
- 8) Elucidate the concepts in activity planning in software project management.**

MODULE 5

- 1) Define software quality and explain step-wise the place of software quality with its importance**
- 2) Explain the role of product and process metrics in software quality management and describe how these metrics can be used to improve software quality.**
- 3) Explain the ISO 9126 standard for software quality and describe its six quality characteristics.**
- 4) Describe the many testing phases, the benefits of automated testing over manual testing, and the various tools used in this process.**
- 5) Explain Structured programming and clean-room software development.**
- 6) Identify how Automation testing is preferred over manual testing, with different tools used for Automation Testing.**
- 7) Explain the place of software quality in project planning**