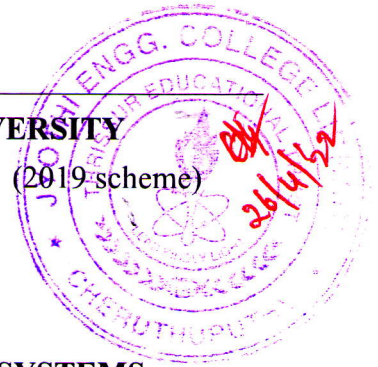


Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
Fifth Semester B.Tech Degree Examination December 2021 (2019 scheme)

**Course Code: CST309****Course Name: MANAGEMENT OF SOFTWARE SYSTEMS**

Max. Marks: 100

Duration: 3 Hours

**PART A***(Answer all questions; each question carries 3 marks)*

- |    |  | Marks |
|----|--|-------|
| 1  | Outline the advantages of incremental development model over Waterfall model.  | (3)   |
| 2  | Differentiate plan-driven and agile software development approach.             | (3)   |
| 3  | Summarize the structure of a SRS document.                                     | (3)   |
| 4  | Explain Personas, Scenarios, User stories and Feature identification.          | (3)   |
| 5  | Define any four types of system testing.                                       | (3)   |
| 6  | Identify the types of maintenance that a software product might need. Explain. | (3)   |
| 7  | What is risk? Explain different types of software risk.                        | (3)   |
| 8  | List out the factors that affect software pricing.                             | (3)   |
| 9  | Outline the elements of Software Quality Assurance.                            | (3)   |
| 10 | Describe different levels of the CMMI model.                                   | (3)   |

**PART B***(Answer one full question from each module, each question carries 14 marks)***Module -1**

- 11 a) Explain the major phases in waterfall model of software development. Which phase consumes the maximum effort for developing a typical software product? (7)
- b) You are given a project which involves many risks, that are difficult to anticipate at the start of the project. Which life cycle model is best suited for the project? Justify your answer. Explain that model in detail. (7)

- 12 a) Explain different process activities. (8)
- b) Explain Agile Development techniques and Agile Project Management. (6)

**Module -2**

- 13 a) Illustrate Requirement elicitation and analysis process with the help of a diagram. (8)
- b) Why is requirements elicitation considered as a critical task in requirements engineering? Explain any two methods for requirements elicitation. (6)
- 14 a) Briefly explain design concepts in Software Engineering. (8)
- b) Explain different architectural styles used in Software design. (6)

**Module -3**

- 15 a) Compare any two types of Black box testing strategies citing examples. (7)
- b) Explain basis path White box testing strategy with an example. (7)
- 16 a) Discuss the Formal Technical Review (FTR) process performed by Software Engineers. (6)
- b) Describe Continuous Integration, Delivery and Deployment (CI/CD/CD) in DevOps Automation. (8)

**Module -4**

- 17 a) List out and explain fundamental project management activities. (4)
- b) Discuss Risk management process in detail with a diagram. (10)
- 18 a) Define software configuration management. Explain different activities involved in configuration management. (10)
- b) Summarize Software Project planning process. (4)

**Module -5**

- 19 a) List out the metrics that are used to measure software quality. Justify how these metrics interpret the quality of the Software. (5)
- b) Explain why micro services should have low coupling and high cohesion. (9)
- 20 a) Describe Software Process Improvement process. (10)
- b) Outline the elements of a SPI framework. (4)

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