

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

FIFTH SEMESTER B.TECH DEGREE EXAMINATION (Regular), DECEMBER 2022**(2020 SCHEME)****Course Code : 20CST381****Course Name: Concepts In Software Engineering****Max. Marks : 100****Duration: 3 Hours****PART A*****(Answer all questions. Each question carries 3 marks)***

1. Discuss any three problems associated with Prototyping.
2. Outline any three advantages of Incremental development model over Waterfall Model in software development.
3. Differentiate Functional and Non-Functional Requirements in software requirement analysis.
4. Discuss briefly any three Requirement Elicitation Techniques used in Software Engineering.
5. List any three open source licenses in software implementation.
6. Explain the types of maintenance that a software product might need.
7. List out the main three factors affecting Software Pricing.
8. Explain Software Project Planning Process.
9. List out any three metrics that are used to measure Software Quality.
10. What is the importance of Software Quality Assurance?

PART B***(Answer one full question from each module, each question carries 14 marks)*****MODULE I**

11. a) A supermarket owner decided to automate the billing process and give his finite requirements to the software company. The company follows a modular design. The project head wants to reduce the overhead of people allocation during development. You have to recommend a process model which is best suitable in this case and explain its phases with a neat diagram. (10)
- b) Discuss briefly on Agile Project Management. (4)

OR

12. a) A national bank is planning to automate their banking process. They approached a software company to develop software. Though the banking system deal with huge amount of money, the project is considered as "Risky project". Banking officials are ready to provide enough time for product development. They are only concerned (10)

with the quality of the product. Banking officials demanded error free software. Illustrate the phases of the software process model that can be applied in this scenario.

- b) Discuss various Software Engineering Ethics. (4)

MODULE II

13. a) Illustrate the Requirement Elicitation and Analysis process with the help of a neat diagram. (8)

- b) Discuss briefly on Personas, Scenarios, User Stories and Feature Identification. (6)

OR

14. a) Explain various design concepts used in Software Engineering. (8)

- b) Explain different architectural styles used in Software Design. (6)

MODULE III

15. a) Define System Testing. Explain any four types of System testing practices. (8)

- b) Describe Basis Path White Box Testing strategy with an example. (6)

OR

16. a) Describe Continuous Integration, Delivery and Deployment (CI/CD/CD) in DevOps Automation. (8)

- b) Discuss the Formal Technical Review(FTR) process performed by Software Engineers. (6)

MODULE IV

17. a) Explain Risk Management Process in detail with a diagram. (9)

- b) Elaborate the fundamental project management activities carried out in a software industry. (5)

OR

18. a) Define Software Configuration Management. Explain different activities involved in Configuration Management. (9)

- b) Illustrate the Key principles of Lean Software Development. (5)

MODULE V

19. a) Discuss Cloud Based Software. List out the benefits of using cloud for software development. (8)

- b) Describe different levels of CMMI model. (6)

OR

20. a) Describe Software Process Improvement process. (8)

- b) Explain Software Quality Dilemma with an example. (6)
