

Model Question Paper - Software Engineering

Duration: 3 Hours

Maximum Marks: 100

Section A - Short Questions

(5 marks each)

1. Define Software Engineering and explain its importance in the development of large-scale systems. (5 marks)
2. Explain the Software Development Life Cycle (SDLC) and discuss different Software Process Models. (5 marks)
3. What are functional and non-functional requirements? Provide examples of each. (5 marks)
4. Discuss the importance of a Requirements Specification Document in the Software Development process. (5 marks)
5. Describe the process of Requirements Gathering and Analysis. (5 marks)
6. What is the difference between high-level design and low-level design? Explain with examples. (5 marks)

Section B - Long Questions

(10 marks each)

1. Discuss the principles of good software design. How do design patterns improve the design process? Explain with examples. (10 marks)
2. What are UML diagrams? Explain the significance of Use Case, Class, and Sequence diagrams in system design. Provide an example of each. (10 marks)
3. What are the common practices for coding in software engineering? Discuss the importance of coding standards and IDEs. Explain version control systems with an example. (10 marks)
4. Explain the concept of Test-Driven Development (TDD) and its benefits. What are the main types of testing in software engineering? Discuss Automated testing tools with examples. (10 marks)
5. What are the different types of software maintenance? Explain each type with examples. Discuss the importance of bug tracking in software maintenance. What tools are commonly used for this purpose? (10 marks)