2023

SOFTWARE ENGINEERING

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

*Answer **any five** questions.*

1. Explain with a diagram the classical waterfall model. List the major demerits of   20
    the model. How have other models overcome the demerits of the waterfall
    model?

2. What are the main software testing strategies? Explain briefly. Differentiate   20
    between verification and validation of software.

3. a) What is the significance of software design? Explain design of a software   15
        using any two UML diagrams.

    b) What is Software Reverse Engineering? Explain with an example.   5

4. a) Briefly explain the software project management plan.   10

    b) What are the desirable software quality factors? Briefly discuss the role of   10
        ISO 9000 certification in ensuring quality standards.

5. a) Describe the organization structure of a software industry. What are the   10
        qualities of a good software engineer?

    b) What is Cyclomatic Complexity? Explain with an example computation of   10
        cyclomatic complexity. Define the significance of Cyclomatic Complexity.

6. Write short notes on the following (Any Two):   20

    a) COCOMO Model   b) Software Risk Management

    c) Six Sigma Certification

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