

Course	:	BSCIT	Date	:	17/07/2026
Subject Code	:	BSCITRMA-302	Time	:	03:00pm to 05:15pm
Subject Name	:	Software Engineering	Duration	:	02.15 Hours
			Max. Marks	:	70

1. Explain Software Engineering. Discuss Software Characteristics, Software Crisis and the need for Software Engineering.
2. Explain Software Development Life Cycle (SDLC). Describe all phases involved in software development.
3. Explain Requirement Engineering Process. Discuss Requirement Gathering, Analysis, Specification and Validation.
4. Explain Object-Oriented Analysis and Design (OOAD). Discuss the importance of UML in software development.
5. Discuss Unit Testing, Integration Testing, System Testing and Acceptance Testing.

1. Differentiate between Program and Software Product.
2. Explain Waterfall Model with its advantages and limitations.
3. Discuss Function Point Analysis (FPA) as a software size estimation technique.
4. Explain Data Flow Diagram (DFD) and its components with suitable examples.
5. Explain Use Case Diagram and Class Diagram.
6. Differentiate between Black Box Testing and White Box Testing.

1. Software Engineering is primarily concerned with:
A) Hardware Maintenance B) Systematic Software Development
C) Network Installation D) Database Administration
2. Which phase of SDLC produces the Software Requirement Specification (SRS)?
A) Design B) Coding
C) Requirement Analysis D) Testing
3. Which SDLC model follows a sequential approach?
A) Spiral Model B) Waterfall Model
C) Prototype Model D) Agile Model
4. SRS stands for:
A) Software Requirement Specification B) Software Resource System
C) System Requirement Service D) Software Review Standard
5. Which estimation technique measures software functionality delivered to users?
A) LOC B) Function Point Analysis
C) Gantt Chart D) PERT
6. DFD is mainly used during:
A) Requirement Analysis B) Coding
C) Testing D) Maintenance

7. UML is mainly associated with:

- A) Structured Programming B) Database Design
- C) Object-Oriented Analysis and Design D) Operating Systems

8. Which UML diagram represents interaction between user and system?

- A) Class Diagram B) Sequence Diagram
- C) Use Case Diagram D) Activity Diagram

9. Black Box Testing focuses on:

- A) Internal Logic B) Program Code
- C) Functional Requirements D) Memory Allocation

10. Which testing is performed on individual program modules?

- A) System Testing B) Acceptance Testing
- C) Integration Testing D) Unit Testing

Part – B (State whether the following statements are true or false)

(10)

- 1 Software Engineering is an engineering discipline for software development.
- 2 Software does not deteriorate with age like hardware.
- 3 SRS is prepared before the coding phase.
- 4 Waterfall Model allows easy backward movement between phases.
- 5 Function Point Analysis is used for software size estimation.
- 6 DFD shows the flow of data within a system.
- 7 UML is a standard modeling language.
- 8 Use Case Diagram identifies system users and their interactions.
- 9 White Box Testing examines the internal structure of the program.
- 10 Acceptance Testing is generally performed before software delivery.
