

Dr. Babasaheb Ambedkar Open University
Term End Examination July – 2026

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

Section A

Answer the following (Attempt any three) (30)

1. Discuss Software Crisis, Evolution of Software Engineering and Importance of Software Engineering.
2. Explain SDLC in detail. Discuss all phases of SDLC with suitable examples.
3. Explain Classical Waterfall Model and Iterative Waterfall Model. Compare their advantages and limitations.
4. Discuss Requirement Elicitation, Requirement Analysis, Requirement Specification and Requirement Management.
5. Discuss Verification and Validation, Static Testing and Dynamic Testing.

Section B

Answer the following (Attempt any four) (20)

1. What are phases of Software Testing Life Cycle? Explain in brief.
2. Explain Feasibility Study and its types.
3. Explain Evolutionary Model and Prototyping Model.
4. Explain the role and responsibilities of a Software Project Manager.
5. Explain Data Flow Diagram (DFD) and Entity Relationship Diagram (ERD).
6. Explain Black Box Testing and White Box Testing.

Section C

Part – A (Multiple Choice Questions) (10)

1. SDLC stands for:
A) Software Design Life Cycle B) Software Development Life Cycle
C) System Design Life Cycle D) System Development Logic Cycle
2. Which phase of SDLC determines whether a project is economically, technically and operationally feasible?
A) Design Phase B) Testing Phase
C) Feasibility Study Phase D) Maintenance Phase
3. Which document is prepared after Requirement Analysis and Specification?
A) SDD B) SRS
C) DFD D) ERD
4. Which SDLC model is also known as the Iterative Enhancement Model?
A) Spiral Model B) Evolutionary Model
C) Waterfall Model D) Build and Fix Model
5. Which SDLC model is most suitable when user requirements are not clearly defined?
A) Classical Waterfall Model B) Evolutionary Model
C) Prototyping Model D) Build and Fix Model

6. Which SDLC model is known as a Meta Model?

- A) Prototyping Model
- B) Evolutionary Model
- C) Iterative Waterfall Model
- D) Spiral Model

7. DFD stands for:

- A) Data File Diagram
- B) Data Flow Diagram
- C) Design Flow Diagram
- D) Data Format Diagram

8. Which testing technique examines the internal structure and logic of a program?

- A) Black Box Testing
- B) Acceptance Testing
- C) White Box Testing
- D) Integration Testing

9. Verification checks:

- A) Whether the software is built correctly
- B) Whether the customer likes the software
- C) Only coding errors
- D) Hardware compatibility

10. UML stands for:

- A) Unified Modeling Language
- B) Universal Modeling Language
- C) Unified Module Language
- D) User Modeling Language

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

(10)

- 1 Software Engineering is an engineering approach to software development.
- 2 Software products are generally developed by a team of developers.
- 3 SRS stands for Software Requirement Specification.
- 4 Maintenance phase requires less effort than software development.
- 5 Iterative Waterfall Model provides feedback paths to previous phases.
- 6 Prototyping Model is useful when requirements are unclear.
- 7 Spiral Model includes risk analysis.
- 8 DFD is used to represent data movement within a system.
- 9 Verification and Validation are the same activities.
- 10 White Box Testing examines the internal logic of a program.
