

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

Course	: BSCIT	Date	: 19/08/2026
Subject Code	: BSCIT-205	Time	: 11:30am to 01:45pm
Subject Name	: System Analysis and Design	Duration	: 02.15 Hours
		Max. Marks	: 70

Section A

Answer the following (Attempt any three)

(30)

1. Explain the concept of a System. Describe the characteristics and elements of a system with suitable examples.
2. Explain the System Development Life Cycle (SDLC). Discuss each phase with the help of a neat diagram.
3. What is Feasibility Study? Explain different types of feasibility studies and their importance in system development.
4. Explain Data Flow Diagram (DFD). Discuss the symbols used in DFD and explain the levels of DFD with suitable examples.
5. Explain the criteria for Hardware and Software Selection.

Section B

Answer the following (Attempt any four)

(20)

1. Differentiate between System Analysis and System Design.
2. Explain Fact-Finding Techniques used in requirement determination.
3. Write a short note on Cost-Benefit Analysis.
4. Explain Decision Tree and its advantages.
5. What is Software Testing? Explain any two testing techniques.
6. Define Verification and Validation (V&V) in ensuring software quality.

Section C

Part – A (Multiple Choice Questions)

(10)

Q.1 Which phase of SDLC is mainly concerned with studying the existing system and identifying user requirements?

- | | |
|------------|----------------|
| A) Design | B) Analysis |
| C) Testing | D) Maintenance |

Q.2 Which feasibility study determines whether the proposed system is financially viable?

- | | |
|--------------------------|----------------------------|
| A) Technical Feasibility | B) Operational Feasibility |
| C) Economic Feasibility | D) Legal Feasibility |

Q.3 Which tool graphically represents the flow of data in an information system?

- | | |
|---------------|----------------------------|
| A) Flowchart | B) Data Flow Diagram (DFD) |
| C) ER Diagram | D) Structure Chart |

Q.4 Which fact-finding technique involves direct observation of system activities?

- | | |
|------------------|--------------|
| A) Questionnaire | B) Interview |
| C) Observation | D) Sampling |

Q.5 Which document describes the functional and non-functional requirements of a proposed system?

- | | |
|----------------|---|
| A) User Manual | B) System Requirement Specification (SRS) |
| C) Test Plan | D) Project Schedule |

Q.6 Which system conversion method operates both the old and new systems simultaneously?

- A) Direct Conversion B) Parallel Conversion
- C) Pilot Conversion D) Phased Conversion

Q.7 Which testing is performed on individual modules of a software system?

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

Q.8 Which of the following is used to represent complex decision logic?

- A) DFD B) Decision Table
- C) Structure Chart D) ER Diagram

Q.9 Which phase of SDLC follows the system analysis phase?

- A) Maintenance B) Design
- C) Implementation D) Testing

Q.10 Which document is prepared to estimate the costs and expected benefits of a proposed system?

- A) User Guide B) Cost-Benefit Analysis Report
- C) Audit Report D) Installation Manual

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

(10)

- 1 A system consists of interrelated components working toward a common objective.
- 2 SDLC always begins with the system implementation phase.
- 3 Economic feasibility evaluates the financial viability of a proposed system.
- 4 A Data Flow Diagram represents the physical layout of computer hardware.
- 5 Observation is one of the fact-finding techniques used during system analysis.
- 6 Parallel conversion is generally considered safer than direct conversion.
- 7 Unit testing is carried out before integration testing.
- 8 Decision Tables are useful for representing complex business rules.
- 9 System maintenance ends immediately after software installation.
- 10 Vendor evaluation is an important part of hardware and software selection.
