302: System Analysis and Design

Unit: 1   **[30%]**
    System Analysis Fundaments: Introduction to System, System Analysis and Design, Types of System: TPS, MIS, DSS, Need for System Analysis and Design, Role of the System Analyst.
    System Development Strategies: SDLC, Structured Analysis Development Method, System Prototype Method.
    Case Tools: Benefits of Computer-Assisted Tools, Categories of Automated Tools, Case Components.
    Organizations as System: Interrelatedness and Interdependence of System, System Process, Boundaries, System Feedback, Managing Project Review and Selection.
    Fact-Fining Techniques: Interview, Questionnaire, Record Review, Observation.
    Data Flow Diagram: Advantages, Notations, Rules, Leveling, Logical and Physical DFD.
    Data Dictionary: Importance, Data Elements, Describing Process Specification.
    Structured Decisions: Decision Tree, Decision Tables, Structured English

Unit: 2   **[25%]**
    The Essentials of Design
    Designing Effective Output:
    Objectives, Types of Output, Method, Factors to consider,
    Designing Effective Input:
    Objectives, Guideline for Form design, Screen and Web Forms,
    Designing User Interface:
    Objectives, Types of user interface, Designing Accurate Data-Entry
    Procedures: Objectives, Effective coding, Data-Entry Method, Ensuring data quality through input validation

Unit: 3   **[25%]**
    Quality Assurance through Software Engineering
    Design of Software, Software design and documentation:
    Structured Flowcharts, HIPO, Warnier/Orr Diagrams
    Managing Quality Assurance:
    Level of Assurance, Level of Test
    Implementation of Information System:
    Training Strategies, Conversion, Post Implementation Review

Unit: 4   **[20%]**
    Case Studies:
- Financial Accounting System
- Payroll System
- Library System
- Inventory System
- Online Banking System
- Railway Reservation system
  (Input, Output, DFD)

Text Books:
1. Analysis and Design of Information System,James A.Senn
2. System Analysis & Design, S. Parthasarthy & B.W. Khalkar

Reference Books:
1. Introduction to SAD by lee
2. System Analysis & Design by kendall and kendall