

System Analysis and Design

UNIT - I

System concept, Definition, Characteristics of system, Elements of a System: Input, Output Processor, Control, Feedback, Environment, Boundaries and Interface, Principles of System (04), Types of System: Abstract and Physical system, Open and Closed System, Deterministic and Probabilistic System, Need of Information, Types of Information, Man-made Information Systems: DSS, MIS, TPS (05), System analyst, role of system analyst, qualification and responsibilities of System Analyst, Multifaceted role of System analyst (03).

Lectures: 11

UNIT - II

System development life cycle and its various phases: Preliminary investigation, determination of system requirements, Development of software, System testing, Implementation, evaluation and maintenance, System documentation: Types of documentation and their importance (05), General structure of SRS, System Flow chart and its symbols, Software Crisis: From programmers' point of view, from users' point of view, System Planning, Feasibility study: steps in feasibility study, its report and importance (05).

Lectures: 10

UNIT - III

System Analysis: Information Gathering and its various Tools and techniques, tools of Structured Analysis: (02) ER diagram, data flow diagrams, Data Dictionary, Decision Tree, Structured English, Decision Table (06), Introduction of Control Flow Graph, CPM, PERT chart, Gantt chart (02), System Design Concepts: Module specifications, Module Coupling and cohesion, Top-down and bottom-up design; Logical and Physical design (02).

Lectures: 12

UNIT - IV

System design - Input design: Input data, Input media and devices; Output design; Form Design: Classification of forms, Requirements of Form design, database design: objectives of database, Types of relationship, types of data structure (04), System testing and quality assurance - reason of system testing, nature of test data, Test plan, types of System test, Goal of Quality assurance in SDLC, levels of Quality Assurance (05), Introduction of implementation: System Conversion, Conversion methods, User Training, primary activities of a maintenance procedure and types of maintenance (03).

Lectures: 12