BCA – 125 Structured System Analysis and Design

Maximum Marks: 100 **External: 80**
Minimum Pass Marks: 35 **Internal: 20**
Time: 3 hours

Note: Examiner will be required to set Nine Questions in all. First Question will be compulsory, consisting of objective type/short-answer type questions covering the entire syllabus. In addition to that eight more questions will be set, two questions from each Unit. Student will be required to attempt FIVE questions in all. Question Number 1 will be compulsory. In addition to compulsory question, student will have to attempt four more questions selecting one question from each Unit.

UNIT – I

System Concept: Definition, Characteristics, Elements of system, Physical and abstract system, open and closed system, man-made information systems.
System Development Life Cycle: Various phases of system development, Considerations for system planning and control for system success.
Role of system analyst.

UNIT – II

System Planning: Bases for planning in system analysis: Dimensions of Planning.
Initial Investigation: Determining user's requirements and analysis, fact finding process and techniques.
Tools of structured Analysis: Data Flow diagram, data dictionary, IPO and HIPO charts, Gantt charts, pseudo codes, Flow charts, decision tree, decision tables.
Feasibility study: Technical, Operational & Economic Feasibilities.

UNIT – III

Cost/Benefit Analysis: Data analysis cost and benefit analysis of a system.
Input/ Output and Form Design, File Organization and database design: Introduction to files and database, File structures and organization, objectives of database design, logical and physical view of data.

UNIT – IV

System testing: Introduction, objectives of testing, test planning, testing techniques.
Quality assurance: Goal of quality assurance, levels of quality assurance
System implementation and software maintenance: primary activities in maintenance, reducing maintenance costs.

TEXT BOOKS:

1. Awad M. Elias, "System Analysis and Design", Galgotia Publication.

REFERENCE BOOKS:

1. Igor Hawryszkiewyez, "Introduction to System Analysis and Design", Prentice-Hall.
2. Jeffrey L. Whitten, and Lonnie D. Bentey, "Systems analysis and Design Methods", Tata McGraw-Hill.
3. Mark Lejk, and David Deeks, "An Introduction to System Analysis Techniques", Prentice Hall.