

SYLLABUS

INFORMATION SYSTEM DESIGN AND IMPLEMENTATION

BCA-16-303

L	T	P	Cr
6	-	-	3

Time Duration : 3 Hrs.

External Marks : 65

Internal Marks : 10

Number of Lectures : 60

Objective: To teach the students about the various aspects of Systems to be developed their analysis and finally design. The motive is to aware the learners about pre requisite of software development and associated paradigms. After completing this course students will be able to be design and develop systems.

Note :

- (i) The Question Paper will consist of Four Sections.
- (ii) Examiner will set total of NINE questions comprising TWO questions from each Section and ONE compulsory question of short answer type covering whole syllabi.
- (iii) The students are required to attempt ONE question from each Section and the Compulsory question.
- (iv) All questions carry equal marks unless specified.

SECTION-A

Systems Concepts and Information Systems Environment: Definition and characteristics of a system. Elements of a system Environment: Boundaries and interface. Types of systems: Physical or Abstract Systems, Open and Closed System, Man - made information systems.

The System Development Life Cycle: Introduction to various phases- Recognition of Need, Feasibility Study, Analysis, Design, Implementation, Post-Implementation and Maintenance.

The Role of System Analyst: Skills of a System Analyst, various roles of the Analyst.

SECTION-B

System Planning and the Initial Investigation: Bases for planning in system analysis, Initial investigation, determining the users information requirements, Problem definition and Project Initiation, Background Analysis, Fact Finding, Fact Analysis, Determination of Feasibility.

Information Gathering: Introduction, Information Gathering tools: Review of Literature, Procedures and forms. On -site observation. Interviews and questionnaires.

Tools of Structured Analysis: Various tools of structured analysis: Data flow diagram (DFD), Data Dictionary, Decision tree and structured English, Decision table, Pros and cons of each tools.

SECTION-C

Feasibility Study: System Performance-statement of Constraints, Identification of Specific System Objectives, description of Outputs. Feasibility Study – Feasibility considerations, Steps in feasibility analysis. Feasibility Report.

System Design: The Process of Design-Logical and Physical Design, Design methodologies: Structured design, Functional Decomposition

System Testing and Quality Assurance: Testing, System testing, Quality assurance and its goals in its system life cycle, Levels of quality assurance, Trends in testing.

SECTION-D

Implementation and Software Maintenance: Introduction, Conversion-Activity network for Conversion, File Conversion, User Training: Elements of user Training Post implementation review. Software Maintenance - Primary activities of a Maintenance Procedure, Reducing Maintenance Costs.

Hardware and Software Selection: Types of Software, Procedure for Hardware/Software selection: Major phases in selection, Evaluation and Validation, Vendor Selection, Post -Installation Review. Software selection- Criteria for Software Selection, the evaluation process.