

ELECTIVE- IT (Information Technology)
SYSTEM ANALYSIS AND DESIGN

Subject Code- ITM 1

Max. Marks (Ext. Exam): 80

Min. Pass Marks : 32

OBJECTIVES :

This Course is aimed at developing an appreciation of Analysis and Design of Computer based commercial data processing systems.

COURSE CONTENTS :

- UNIT-I Overview of Systems analysis and Design; Software applications today the changing scenarios – Introduction to different methodologies and Structured System Analysis - Problem Identification – requirement analysis: tools and techniques – feasibility analysis – Operational , Technical and Economical Feasibility – details of SDLC approach.
- UNIT-II Business Systems Concept; Systems Development Life Cycle; Project Selection; Feasibility study, Tools for Analysis and Design of Business Systems; Methodologies Available; Need for Structured Techniques; Structured Techniques Available.
- UNIT-III System Requirement Specification and Analysis; Data Flow Diagrams; Data Dictionaries; Process Organization and Intersections; Decision Analysis; Decision Trees and Tables; Expansion, Explosion and Normalization. Detailed Design; Modulation; Module Specification; File Design; Data Base Design.
- UNIT-IV System Control and Quality Assurance; Documentation Tools; Testing Techniques Available; System Controls and Audit Trails; System Administration and Training; Conversion and Operations Plan. Hardware and Software Selection; Hardware Acquisition; Benchmarking, Vendor Selection, Operating System Selection, Language Processors, Performance and Acceptance Testing Criteria.
- UNIT-V Managing Data Processing in an Organization; Data Processing Setup; Project Management Techniques for managing Software Projects.

SCHEME OF EXAMINATION:

Total Marks : (Internal 20, External 80) = 100 marks

PATTERN FOR EXTERNAL EVALUATION:

Sec. A: (Short Answers) 4 out of 8 4 x 8 = 32 Marks.

Sec. B: (Essay type & case) 3 out of 5 3 x 16 = 48 Marks.

SUGGESTED READINGS :

1. Awad, Elias M. 'System Analysis and Design'. 2nd ed. New Delhi, Printice Hall of India, 1990.
2. Coad, Peter and Edward, Yourdon. 'Object Oriented Analysis'. 2nd ed. Englewood Cliff, New Jersey, Yourdon Press, 1991.
3. Hawryszkiewycz. I.T. 'Introduction to Systems Analysis & Design'. 2nd ed. New Delhi, Printice Hall of India, 1991.
4. Marco, T.D. 'Structured Analysis & System Specification', New Delhi Yourdon Press, 1989.
5. Rajaraman, V. 'Analysis and Design of Information Systems'. New Delhi, Printice Hall of India, 1991.
6. Van Over, Davic 'Foundations of Business Systems' Fort Worth, Dryden Press, 1992.
7. Whitten, J.L. etc. 'System Analysis and Design Methods', New Delhi, Galgotia, 1994.