

Krantiguru Shyamji Krishna Verma Kachchh University, Bhuj
Master of Science (Computer Applications & Information Technology)
Semester: IV

Paper Code: CECS409		Total Credit :04 Total Marks : 70 Time : 3 Hrs
Title of Paper: System Analysis and Design		
Unit		
Unit	Description	Weighting
I	Overview of systems analysis & Design, role of systems analyst, user clientele, categories of business systems - TPS, MIS , DSS OAS, Strategic information systems. System development strategies - classical, structured and Prototyping. Reasons for systems project initiation, Project selection and review - Committee methods, project requests. Preliminary investigation - scope of project, feasibility study, institutional v/s end-user applications.	20%
II	Requirement determination - process, data used, information produced, schedule, controls, transaction and decision requirements etc. Fact finding techniques - interview, questionnaires, document scanning, observation. Tools for specifications - decision trees, decision tables, structured English. Structured analysis - Physical and logical data flow diagrams, process charts, data directories. Application prototyping - rationale, suitability, steps, uses. Tools for prototyping - 4GL, report generators, application generators, screen generators. strategies for prototyping	20%
III	Modelling object classes, attributes & relationships. Automated tools - front end, back end, integrated tools. CASE tools- functionality and benefits. Objectives in system design. Components to be designed - output, files, database, input, controls, procedures, codes, program specifications. Management of Design Process. Output Design - needs, types of output, presentation of outputs. Printed outputs. Input and controls - capture of input data, source documents, coding methods. Input validation - batch controls, transaction controls, check digit system, and hash totals. Data Entry forms design. User interface design purpose, characteristics, actions to be incorporated, navigation, message display, dialogue design	20%
IV	File design - Storage media selection, types of files by purpose. File organization and access methods. Backup and recovery design. Database design - entity relationship, Schema, data models, normalization. Security design, Object oriented approach. Data communication design - choice of communication channels, control devices and protocols. Design of LAN systems, client/Server strategies	20%
V	Development and testing. Tools for documentation - HIPO, Structured flowcharts, warnier/orr diagrams. quality assurance - testing, verification and validation . Testing strategies. Creation/conversion of master files. Loading the database. Preparation of system documentation. User training, conversion from old system to new system. Post implementation review. System Development Management - estimation of development time, team management. Hardware/ software selection - selection criteria, benchmarking, purchase/ lease/rent options	20%
Basic Text & Reference Books :-		
1.	Analysis and Design of Information Systems, James Senn, McGraw Hill, 1989.	
2.	Systems analysis and design and the Transition to Objects, Sandra D. Dewitz, McGrawHill International, 1996.	
3.	Systems analysis and Design , elias awad, Galgotia , 1997	64

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Paper Code: CECS409		Total Credit : 4	
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		Time : 3 Hrs	
Unit	Description	Total Marks	Total Marks
I	Q.1 (A) Answer the Following. (Definitions, Blanks, Full Forms, True/False, Match the Following)	06	14
	Q.1 (B) Medium / Long Questions. (With Internal Option)	08	
II	Q.2 (A) Answer the Following. (Definitions, Blanks, Full Forms, True/False, Match the Following)	06	14
	Q.2 (B) Medium / Long Questions. (With Internal Option)	08	
III	Q.3 (A) Short / Medium Questions (With Internal Option)	06	14
	Q.3 (B) Medium / Long Questions. (With Internal Option)	08	
IV	Q.4 (A) Short / Medium Questions (With Internal Option)	06	14
	Q.4 (B) Medium / Long Questions. (With Internal Option)	08	
V	Q.5 (A) Short / Medium Questions (With Internal Option)	06	14
	Q.5 (B) Medium / Long Questions. (With Internal Option)	08	