

**LIBRARY AND INFORMATION SCIENCE
(PG DEGREE STANDARD)**

CODE NO: 267

UNIT – I INFORMATION AND COMMUNICATION

- (i) Data, Information and Knowledge; Information – Notions; Information Theories
- (ii) Library – Social relevance; Types; Functions, Legislation.
- (iii) Information Transfer Cycle; Diffusion pattern; Communication – Theories and Models; Channels and Barriers to Communication
- (iv) Information / Memory institution of different kinds: Libraries, Archives, Documentation Centers, Information Analysis Centers, Museums and respective roles and functions.
- (v) Professional bodies and Association – UNESCO, IFLA, ALA, CILIP, ILA, IASLIC, IATLIS, etc

UNIT–II MANAGEMENT OF INFORMATION CENTRES

- (i) Management - Concept, Definition; Schools of Management Thought, functions of Management (POSDCORB).
- (ii) Human Resource Management - Organisation models; job description and job Analysis; selection, recruitment, training
- (iii) Financial Management: Planning and Control; Resource generation; Budget and Budgeting; Budgetary control techniques; Cost Benefit, Cost Effective analysis
- (iv) Materials Management: Collection development Policy; Issues – selection, acquisition; Library routines, Circulation, Preservation and conservation, Physical facilities - building and equipments, Marketing of information.
- (v) Planning – Concept, Definition Types; Systems Analysis and Design; Knowledge Management, total quality management, MBO and MIS

UNIT-III KNOWLEDGE ORGANISATION

- (i) Universe of Subjects; Modes of formation of Subjects; Knowledge Organization
- (ii) Classification- Various Schemes of Classification - CC, UDC, LC and DDC – Overview; BSO; General theory of classification; CRG; Cannons and Principles - Idea, Verbal and Notation planes; Facet analysis;
- (iii) Cataloguing - Purpose, Structure, Types – Inner and Physical forms; Normative Principles, Canons & Laws; Standards – ISBDs, AACR, RDA; FRBR
- (iv) Subject Cataloguing – Principles; Subject heading lists; Thesauri and Vocabulary control
- (v) Bibliographic formats – International Standards - ISO 2709, MARC21, UNIMARC, CCF and National formats. Metadata – Standards: Dublin Core, Mark up languages – HTML, XML, RDF

UNIT-IV INFORMATION SOURCES

- (i) Information Sources – Types – Documentary and Non documentary; Primary, Secondary and Tertiary; Electronic Sources of Information; Human and Institutional Sources; Invisible Colleges; Technological Gatekeepers
- (ii) Reference Sources - Ready Reference Sources – Types - Dictionaries, Encyclopedias, Annuals, Biographical sources, Handbooks and Manuals, Geographical Sources.
- (iii) Bibliographical Sources – Bibliographies; Union Catalogues; Indexing and Abstracting sources; News summaries;
- (iv) Web Resources - Subject Gateways and Portals; Databases – Bibliographical, Abstracting and Indexing; Full-text databases; Citation Databases
- (v) Evaluation of Information sources - Print and Web Resources; Multimedia; Open Access Resources

UNIT-V INFORMATION SYSTEM, PRODUCTS AND SERVICES

- (i) Information Systems - Concept, Purpose, and Types; Global & National Information Systems; MEDLARS, INIS, AGRIS, INSPEC, OCLC, ERONAT, NISCAIR, NASSDOC, Library Networks: INFLIBNET, DELNET, etc.
- (ii) Information Services- Users Education and Information Literacy; Documents Delivery, Translation; Current Awareness, SDI, E-Alert & Web-based Services
- (iii) Users of Information- Understanding the users; Categories of users and their needs; Information use contexts; Information seeking behaviour of users; Theories of Information seeking behaviour.
- (iv) Information Analysis and Consolidation Products and Services.
- (v) Use Studies; Methods of Users studies; Major information users and use studies and their findings

UNIT-VI INFORMATION STORAGE AND RETRIEVAL

- (i) Information Retrieval System – Concept, Definition, and Components
- (ii) Indexing systems – Pre-coordinate and Post-coordinate; General Theory of Subject Indexing; Keyword Indexing; Citation Indexing
- (iii) Information Retrieval Models – Boolean, Probabilistic, Cognitive and Vector Models; Alternative IR Models: algebraic and probabilistic models (Bayesian networks)
- (iv) Search and Searching - Search Process; Search strategies; Search engines
- (v) Evaluation of Information Retrieval Systems - Purpose, Criteria – Recall and Precision; Major Evaluation Studies – MEDLARS; SMART Retrieval; STAIRS, Project TREC.

UNIT-VII RESEARCH METHODS

- (i) Research - Concept, Definition, Objectives and Significance; Types; Research Problems
- (ii) Research Design – Definition, Need; Sampling; Hypothesis – Types and Testing
- (iii) Methods and Tools - Data collection - Survey, Experimental, Case-study, Observation, Questionnaire, Interview schedules.
- (iv) Introduction to Statistics; definition of statistical terms-population, sample, data and variables; frequency distributions; scales of measurement; presentation of data- graphical and tabular; frequency tables, histogram, frequency curves; correlation and regression analysis; measures of central tendency.
- (v) Report Writing – Components of a Research Report; Style manuals – MLA, APA, Chicago, Turabian.

UNIT-VIII INFORMATION TECHNOLOGY (IT) AND LIBRARY AUTOMATION

- (i) Information Technology – Concept – Definition - Evolution of Digital Computers; Introduction to Telecommunications; Number Systems: Binary, Octal, Hexadecimal, Representation of Numbers in Computers; Character Representation: ASCII, ISCII and UNICODE; File formats
- (ii) Basic components of a Computer – Arithmetic Logic Unit; Control Unit; Memory Unit – Static and Dynamic RAM, ROM, Cache memory; Input / Output devices
- (iii) Operating System- Linux, Windows; Fundamentals of Programming; Introduction to C programming; Object Oriented programming; Java, PHP
- (iv) Database Management System– Concepts, Functions; Integrity and Security issues
- (v) Library Automation - Overview of library automation software; Criteria for selection of software; and Hardware (including differently-abled); Open and Commercial LMS

UNIT-IX DIGITAL LIBRARIES

- (i) Digital Libraries - Concept and Definition; Historical development of Digital Libraries. Copyright and license issues.
- (ii) Digitization Process - Software, Hardware and Best practices; Scanners and Scanner types; OCR and OCR software
- (iii) Technology for DLs - Open source software - Open Standards and File formats; Harvesting metadata, OAI-PMH and DL Interoperability;
- (iv) Digital Library Architecture - Grid architecture; Open URL integration;
- (v) Digital Resources Management - Digital Preservation- Persistent identifiers – DOI and CNRI Handles; Multilingual digital repositories and Cross- language information retrieval

UNIT-X QUANTITATIVE TECHNIQUES AND INFORMETRICS

- (i) Informetrics - Genesis, Scope and Definition; Librametry, Bibliometrics, Scientometrics and Webometrics
- (ii) Classical Bibliometrics laws - Zip's Law, Lotka's Law, Bradford's Law of Scattering; Generalized Bibliometrics distributions. 80-20 rule, Price's Law relating to scientific productivity; Analysis of use statistics.
- (iii) Growth and Obsolescence of literature - Various growth models; Aging factor and half-life: real vs. apparent; synchronous vs. diachronous.
- (iv) Citation analysis - Bibliographic Coupling and Co-citation Analysis
- (v) Bibliometric indicators: Impact factor, h-index, g-index,i-10;Mapping of Science; Citation Index.
