

## Fundamentals of Library and Information Science

<b>Units</b>	<b>Content</b>
1	<p><b>Introduction to Library and information Science</b></p> <p>Introduction to Information Society, Knowledge Society</p> <p>Nature &amp; Scope of Library &amp; Information Science, Definition, role &amp; functions of libraries and information centres</p> <p>Five Laws of Library Science.</p>
2	<p><b>Types of Libraries and Documents</b></p> <p>Types of Libraries: Academic, School, Special, Public, National Libraries- Role, functions, and services of different types of libraries and information centres. (with examples of important libraries of the world)</p> <p>Types of Documents : Print , Non Print including digital documents --Nature of the Document, use of documents</p>
3	<p><b>Contribution of Professional Associations and organisations</b></p> <p><u>National Level</u>: ILA, IASLIC, IATLIS</p> <p><u>International Level</u>: ALA, IFLA, SLA, CILIP, ASLIB, ASIS etc.: their contributions to growth of libraries &amp; library activities.</p> <p>Library &amp; Information Networks : INFLIBNET, DELNET            Information Centres : CSIR, NISCAIR, DESIDOC            Massive open online course (MOOC) platform : SWAYAM            Other : RRRLF, UGC, MHRD, UNESCO</p>
4	<p><b>Library Scene in India</b></p> <p>Historical development of libraries in India with special reference to the post -independence period</p> <p>National Knowledge Commission</p> <p>Digital libraries of India</p> <p>Library legislation in India</p> <p>IPR (Copyright &amp; Patent) &amp; Libraries</p>

	<p>Introduction to Right to Information</p> <p>National Education Policy 2020: Introduction and role of libraries and librarian</p>
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### Management of Knowledge Resource Centres

Units	Content
1	<p><b>Introduction to Management</b></p> <ul style="list-style-type: none"> <li>- Definition, Levels, Functions of Management</li> <li>- Select Schools of Management Thought.</li> <li>- Strategic Planning : SWOT Analysis, PERT/CPM</li> <li>- The library within an organizational structure</li> <li>- Influence of institutional activities on the library</li> <li>- Organisational structure of a library               <ul style="list-style-type: none"> <li>- Library as a system, Sub-system of the library</li> </ul> </li> <li>- Organisational Culture and Climate of a Library</li> <li>- Management of libraries (including library committees, authorities, etc.)</li> </ul>
2	<p><b>Collection Development</b></p> <ul style="list-style-type: none"> <li>- Collection Development Policy- components</li> <li>- Budgeting</li> <li>- Acquisition of               <ul style="list-style-type: none"> <li>- Books- Objectives, Selection policy, selection tools, methods of acquisition, Procedure and Workflow of book acquisition, Maintenance of Records</li> <li>- Periodicals- Objectives, Selection policy, selection tools, methods of acquisition, Procedure and Workflow of periodical acquisition, Maintenance of Records</li> <li>- Accession List</li> </ul> </li> </ul>
3	<p><b>Collection Maintenance</b></p> <ul style="list-style-type: none"> <li>- Preservation and conservation of library resources- Deterioration of resources- physical, chemical, biological factors, abuse and mishandling</li> <li>- Preventive conservation- dusting, regular maintenance</li> <li>- Curative conservation - Binding, Fumigation, Lamination, Restoration, Repair, Encapsulation</li> <li>- weeding and withdrawal</li> <li>- stock verification,</li> <li>- Collection evaluation</li> </ul>

4	<p><b>Library Technical Functions</b></p> <ul style="list-style-type: none"> <li>- Accessioning- Procedure of accessioning &amp; Accession Register</li> <li>- Cataloguing- cataloguing Standards, Data entry structures and procedure of cataloguing, authority files, customisation, maintaining records</li> <li>- Classification- classification schemes, Levels of classification, customisation, maintaining records</li> <li>- Physical Processing of resources</li> </ul>
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### **Knowledge Organisation**

<b>Unit</b>	<b>Contents</b>
1	Classification: Concept, Definition and Types  Need and Object of Library Classification  General Principles of Library Classification  Species of Library Classification
2	Postulational Approach: Concept and Utility  Facet Analysis, Devices and Phase Relation  Standard Sub division
3	Notation: Concept, Need, Quality, and Types  Array, Sequence, Canons Mnemonics  Book Number
4	Major schemes of Classification: DDC, LC, CC and UDC  Current trends of Classification

## Information Retrieval: Tools and Techniques

Units	Content
1	Cataloguing- objectives, Meaning, Purposes, Functions, and concept of access points with reference to Card Catalogue & OPAC their Structure and Uses
2	Introduction and utility of bibliographic exchange formats: MARC 21 and CCF, Retro conversion, Copy cataloguing,  Bibliographic Standards: AACR2, ISBD, MARC21, CCF, Z39.50  Advances in Cataloguing: FRBR, RDA, BIBFRAME
3	Principles of Subject cataloguing; subject authority files, cross reference structure, advantages and limitations of the approach.  Indexing and thesaurus construction  Indexing languages: function and Structure, latest trend in automatic indexing  Vocabulary control: semantic and syntactic Issues.
4	Information Retrieval : Concept and need  Information Retrieval Tools : Catalogue Card, OPAC, Web OPAC  Information Retrieval Techniques : Simple and Advanced search: Boolean search, Text & Multimedia retrieval and other techniques

## Reference and Information Sources & Services –I

Units	Content
1	<b>Information Sources</b>  (A) Definition & importance of Reference & Information Sources  (B) Types of Reference and Information sources- Primary, Secondary, Tertiary; Documentary (Print & Online) and Non- Documentary (Institutional and Human), Commercial and open access

	<p>C) Electronic Information Resources – e-Books, e-Journals, Online Databases</p> <p>D) Web resources: Blogs, Portals, Subject gateways, Discussion forums/Group/Mailing list, Academic Social Networks</p> <p>(E) Evaluation of Reference and Information Sources -Print and Online.</p>
2	<p><b>Reference Sources –I</b></p> <p>Encyclopaedias, dictionaries, biographical sources - utility, types, evaluation and familiarity with standard sources in each category</p>
3	<p><b>Bibliographic sources-I</b></p> <p>Bibliographies, catalogues, union catalogues, periodical directories - utility, types, evaluation and familiarity with standard sources in each category</p>
4	<p><b>Reference &amp; Information Services</b></p> <p>Reference process- Reference queries, interview, search process,</p> <p>Information services: Scope, purpose &amp; types</p> <p>Traditional library Services and Electronic web enabled Information Services; (e-CAS, e-SDI / current contents, scanning, photocopying, translation, information consolidation and repackaging) referral service, Libguides</p>

### ICT Applications in Libraries

Units	Content
1	<p>ICT: Concept, types, Components</p> <p>Computer Architecture : Input devices, CPU and Out Put devices</p> <p>Software: System Software and Application Software</p> <p>Binary code &amp; Programming Languages</p>

	Database Management System- Concept and types- DBMS, RDBMS
2	<p>Transmission Media : Cable, and Satellite</p> <p>Mode of Transmission : Simplex, Half Duplex and Full Duplex</p> <p>Computer Networking- Basic Introduction, Types : LAN, MA, WAN</p> <p>Internet, Search Engines and Meta Search Engines</p> <p>Network Topologies,</p> <p>Networking Hardware : Server, Nodes or Workstations, Cable, Network interface card, Hubs, Router, Bridge, Gateway, Data conversion device</p> <p>Networking protocols- TCP/IP, Ethernet, OSI model</p>
3	<p>Library software- Open source, Commercial with examples</p> <p>Selection of Software, Evaluation of software</p> <p>Planning and Implementation of Library Computerization and Automation</p> <p>Library Computerization Modules : Acquisition, Cataloguing, Circulation, Serial Control</p> <p>Barcoding, QR Code</p> <p>Library security: CCTV, RFID, Biometric System, Smart card etc.</p> <p>Cloud Computing</p> <p>Mobile technologies for libraries</p> <p>Augmented Technologies</p>
4	<p>Internet Application in Libraries</p> <ul style="list-style-type: none"> <li>- Search engines - General, Subject specific, meta search engines</li> <li>- Internet communication- email, e-groups, e-conferencing</li> <li>- Web 2.0 tools- Social Networking sites- Facebook, Twitter, Blog, Podcast, RSS, Wiki</li> </ul>

## Research Methodology and Statistical Analysis

Units	Content
1	<p><b>Unit 1: Research Process</b></p> <p>Research :Meaning, nature, types - pure, and applied</p> <p>Literature Search</p> <p>Formulation of research problem and hypotheses</p> <p>Research Design</p> <p>Review of Literature</p> <p>Research proposal</p> <p>Academic integrity/ethics in research</p> <p>Introduction to anti-plagiarism software</p>
2	<p><b>Unit 2: Research Methods and Sampling</b></p> <p>Historical, Descriptive including survey, case study, content analysis, bibliometrics and webometrics, Experimental methods-Evidence based Librarianship, Delphi method</p> <p>Sampling : Meaning, Types – purposive, probability and mixed, Techniques – random sampling, systematic sampling cluster sampling and area sampling</p>
3	<p><b>Unit 3: Data Collection, Analysis and Presentation</b></p> <p>Methods of Data Collection</p> <p>Data collection tools: features, merits &amp; limitations, development and validation</p> <p>Tools: Observation checklists, questionnaires, interview schedules, Online tools</p> <p>Data Analysis : Measures of Central Tendency, Dispersion, Skewness, Co-relation</p> <p>Data Presentation : Tabulation, Graphical etc</p>

	<p>Testing of Hypothesis : Parametric Test and Non Parametric Test</p> <p>Data Processing and analysis using statistical software</p> <p>Interpretation</p>
4	<p><b>Unit 4: Bibliometrics and Report Writing</b></p> <p>Bibliometrics : Origin, Concept and Meaning</p> <p>Bibliometrics Distribution : Bradford's Law, Lotka's Law and Zipf's Law</p> <p>Citation Analysis</p> <p>Report Writing: Research Report Layout, Formats, content style and documentation,</p> <p>Citation style manuals- APA, Chicago, MLA, IEEE</p> <p>Referencing software: Zotero, Endnote, Mendeley</p>

### Reference and Information Sources and Services- II

Units	Content
1	<p><b>Reference Sources II</b></p> <p>Almanacs, yearbooks, handbooks, directories, geographical sources, statistical sources, government publications: utility, types, evaluation and familiarity with standard source</p>
2	<p><b>Provision of Information Services</b></p> <p>Virtual Reference Service: Concept, Definition, Types and Modes, Ask a Librarian/Webforms/FAQs</p>
3	<p><b>Information Literacy</b></p> <p>User education and Information Literacy: need and purpose, models, types of programmes and their organization</p>



4	<p><b>Bibliographic Sources, Information Systems and Networks</b></p> <p>Bibliographic Sources and databases</p> <p>Indexing and abstracting sources including on-line databases: LISA, SciFinder, PsycNet, Citation Index, PubMed, INSPEC, ERIC, Science direct, Management and Social Science related resources, Citation databases: Google scholar, Scopus, WoS</p> <p>Information systems and networks INIS, AGRIS, OCLC</p>
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### **Information Retrieval Techniques (Practical)**

Units	Content
1	<p><b>Cataloguing Books applying AACRII &amp; MARC21 standards</b></p> <p>Cataloguing of Single, Shared and Mixed authorship</p>
2	<p><b>Cataloguing Books applying AACRII standards &amp; MARC21</b></p> <p>Cataloguing of Edited books, Multivolume books and Pseudonyms author</p> <p>Cataloguing of corporate authors</p> <p>Cataloguing of Non book materials e.g. cartographic material, Online resources</p>
3	<p><b>Indexing and Abstracting</b></p> <p>Indexing of documents using thesaurus.</p> <p>Thesaurus Use and Generation of BT, NT, RT, ST, SN, UF, SA etc.</p> <p>Abstracting of research article with suitable keywords</p>
4	<p><b>Search Techniques</b></p> <p>Database Searching Techniques- Simple &amp; Advanced, Federated search, Discovery services</p>

### **Organization and Use of Information Sources (Practica**

<b>Units</b>	<b>Content</b>
1	Classification using DDC 23rd Edition (includes simple subject documents, Standard Subdivision and other tables)
2	Advanced Classification using DDC 23rd Edition including all tables and synthesis
3	<b>Reference Sources</b>  Encyclopaedias, Dictionaries, Biographical sources, Almanacs, Yearbooks, Handbooks, Directories, Geographical sources, Statistical sources, Online news sources (Print and Online)
4	<b>Bibliographic sources</b>  Bibliographies, Catalogues, Union catalogues, Periodical directories, Indexing and Abstracting sources (Print and Online)

### **Information, Knowledge and Society**

<b>Unit</b>	<b>Content</b>
<b>1</b>	<b>Scholarly Communication Process</b>  Information generation and transfer process; facilitating factors and barriers;  Information communication models;  Role of different intermediaries: publishers, database vendors, aggregators, etc.; Information explosion, information overload anxiety, Misinformation/disinformation  Impact of ICT on the generation and dissemination of knowledge.
<b>2</b>	<b>Information and Knowledge Societies</b>  Information Society –definition and Characteristics;  Information as a commodity/resource; Knowledge Society- Leveraging Knowledge; Role of information and knowledge in social change and development;  Issues related to the knowledge society – digital divide, Intellectual Property Rights, e-governance, Right to Information

<b>3</b>	<p><b>Knowledge Management</b></p> <p>Types and characteristics of knowledge, Relationship between data, information and knowledge; Concept of data mining</p> <p>Introduction to Knowledge management</p> <p>Knowledge creation and sharing processes and their problems; Knowledge sharing-tools and techniques;</p> <p>Knowledge management in academic institutions</p>
<b>4</b>	<p><b>Information Users and Their Needs</b></p> <p>Importance and need of user studies</p> <p>Types of users and their user needs</p> <p>Information Seeking behaviour and use patterns;</p> <p>User Behaviour models;</p> <p>User studies –types and methods.</p>

### Management of Knowledge Resource Centres II

Units	Contents
1	<p><b>Management of Library and Information Services</b></p> <p><b>Readers' Services</b></p> <p>Objectives, policies, procedures, work-flow, staffing, records keeping and evaluation (Based on Hybrid Libraries (traditional + automated))</p> <ul style="list-style-type: none"> <li>- Library membership</li> <li>- Circulation</li> <li>- Inter-library loan</li> <li>- Reference &amp; Information Services</li> <li>- User Education &amp; Information Literacy</li> <li>- Outreach services</li> </ul> <p><b>Library Spaces</b></p> <p>Physical planning of libraries</p> <ul style="list-style-type: none"> <li>- Exterior &amp; Interior Layout designing</li> <li>- Furniture &amp; Equipment- Library Ergonomics</li> <li>- Indian Standards for Physical space planning &amp; furniture.</li> </ul>

	<ul style="list-style-type: none"> <li>- Green Libraries</li> </ul> Disaster Management planning
2	<b>Financial Management in Libraries</b> <ul style="list-style-type: none"> <li>- Financial Management and control systems:</li> <li>- budget and budgeting- types, preparation and analysis</li> <li>- resource generation</li> <li>- maintenance of accounts- cost analysis and costing; auditing</li> </ul>
3	<b>Management of Human Resources in Libraries</b> <ul style="list-style-type: none"> <li>a) Categories of Library Staff <ul style="list-style-type: none"> <li>- Government standards</li> <li>- personnel policies,</li> <li>- job specification&amp; job description,</li> <li>- performance appraisal;</li> <li>- staff motivation, training and development: need and techniques;</li> <li>- leadership development team building, interpersonal relationships</li> </ul> </li> <li>b) Outsourcing of Services</li> </ul>
4	<b>Marketing of Library and Information Services</b> <p><b>a)</b> Marketing: Fundamentals of marketing, marketing strategies in LIS, use of ICTs in marketing and public relations, Social media marketing</p> <p><b>b)</b> Management Information Systems in Libraries (Reporting function in libraries, including statistics, annual reports and other reports)</p>

## Digital Libraries

Unit	Content
1	<b>Introduction to Digital Libraries</b> <p>Definition, need, Characteristics, of digital libraries</p> <p>Digital Libraries Vs. traditional libraries</p> <p>Components of digital libraries</p> <p>Software</p> <p>Advance Programming Languages: LAMP (Linux, Apache, MySQL, PHP)</p> <p>Digital Library Software- Types, features with examples GSDL, DSpace &amp; Eprints</p> <p><b>Repositories</b></p>

	Definition and management, Types: Subject, institutional, & cross institutional repositories
2	<p><b>Digital Library Collection</b></p> <p><b>Digitised and Born Digital Collection</b></p> <ul style="list-style-type: none"> <li>- Digital Collection Development Policy</li> <li>- Digitization- benchmarking, selection criteria, process and workflow management; File formats</li> <li>- Born Digital Resources- Types, Acquisition, Access, Licensing Agreements, Open Access Resources/Open Education Resources</li> <li>- Legal issues including IPR, Creative Commons License</li> </ul>
3	<p><b>Organisation of Digital Collection</b></p> <ul style="list-style-type: none"> <li>- File-naming conventions</li> <li>- Mark-up languages - HTML and XML</li> <li>- Identification of digital documents- DOI, PURL</li> <li>- Metadata- Types, Dublin Core, METS, MODES, EAD</li> <li>- Taxonomies &amp; Ontologies- definition &amp; examples</li> </ul>
4	<p><b>Digital Library Services</b></p> <ul style="list-style-type: none"> <li>- Digital Library Website- User interface</li> <li>- Browsing &amp; Searching Digital Collection</li> <li>- Access &amp; Authentication</li> <li>- Personalization</li> <li>- Digital Data Preservation &amp; Backup</li> <li>- Digital Rights Management</li> </ul> <p><b>Management of Digital Libraries</b></p> <ul style="list-style-type: none"> <li>- Planning</li> <li>- Digital Library Evaluation</li> <li>- Manpower training, user training</li> <li>- Library Commons, Assistive technologies</li> </ul>



## School and Children Librarianship

Unit	Content
1	<p><b>(a) Introduction to School and Children's Libraries</b></p> <p>Definition, Objectives and role/ functions of school libraries, role of School Library Associations</p> <p><b>(b) Planning and Designing School Libraries</b></p> <p>Design and Layout; Standards for school and children's libraries and Library Services (IFLA guidelines for Children's Library Services), Maker Space</p>
2	<p><b>Collection Development</b></p> <p>Types of resources (Books, audio-visual, multi-media resources, electronic resources), Genres (Types) of Children's Literature,</p> <p>Role of Children's authors, Illustrators, and publishers</p> <p>Literature for the adolescents</p> <p>Selection and acquisition processes, storage and maintenance of materials -Classification, cataloguing and other technical processes in School Libraries.</p> <p>Reviewing Children's Literature</p>
3	<p><b>The Library &amp; the Reading/Learning process &amp; Promotion of Reading</b></p> <p>Reading process, reading theories, readability criteria, types of reading, role of libraries in reading/learning, Storytelling, Methods of promotion, Information literacy, bibliographic instruction, displays etc.</p> <p>Planning and organizing promotional programmes, Information literacy</p>
4	<p><b>Use of ICT in children's libraries</b></p> <p>Children's Literature websites and digital libraries</p> <p>Developing a site/portal/ video/ Library games/programme using ICT Tools of Children libraries</p>

## Archives Management

Unit	Content
1	<p><b>Archives: Introduction</b></p> <ul style="list-style-type: none"> <li>- Archives, Libraries and Museums : Definitions and Role</li> <li>- Archives and records Management – similarities and differences</li> <li>- Types of Archives- Business Archives, Bank Archives, Archives of Religious Institutions, Government Archives -National, District, State archives , Academic Archives, Newspaper Archives, Music and Film Archives, Family archives etc.- Importance, type of Collection and examples</li> </ul> <p><b>Principles of Archives Management</b></p> <ul style="list-style-type: none"> <li>- Principles of Provenance</li> <li>- Principle of Original Order</li> <li>- Principle of Responsible Custody</li> </ul> <p><b>Record Life Cycle</b></p> <p><b>Role of an Archivist</b></p>
2	<p><b>Collection Management</b></p> <p><b>Developing Collections</b></p> <ul style="list-style-type: none"> <li>- Types of Collections in Archives</li> <li>- Types of records- Print &amp; Digital Records, Non-textual records- Images, memorabilia, oral history records etc.</li> <li>- Acquisition of collection <ul style="list-style-type: none"> <li>- Identifying &amp; selection of records</li> <li>- Survey of Records</li> <li>- Appraisal of Records <ul style="list-style-type: none"> <li>- Methods of acquisition &amp; Accessioning</li> <li>- Weeding, withdrawal &amp; disposal of records</li> <li>- Physical arrangement of records- physical processing &amp; arrangement of records</li> </ul> </li> </ul> </li> </ul> <p><b>Preservation &amp; Conservation of Archival Records</b></p> <ul style="list-style-type: none"> <li>- Deterioration of records- physical, chemical, biological factors, abuse and mishandling</li> <li>- Preventive conservation- dusting, controlling environmental conditions of archival storage, regular maintenance of records and storage rooms etc.</li> <li>- Curative conservation - Binding, Fumigation, Lamination, Restoration, Repair, Encapsulation</li> <li>- Use of IT in Archival Management Digitization of archives- digitization standards, Archives Management Software</li> <li>- Disaster Management Plan</li> </ul>
3	<p><b>Archival Classification and Description</b></p> <ul style="list-style-type: none"> <li>- Classification of Record: Concepts and principles: Collections, Fonds, Records, Series</li> <li>- Description of Archives - ISAD(G) and ISAAR(CPF)</li> <li>- Searching aids- indexing and abstracting</li> </ul>



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**Archives Services**

- Development of access policies- Who can access, Reading room rules & regulations
- Privacy and confidentiality clauses
- IPR issues

**Government of India Archives**

- Government of India Archives- Public Records Act 1993 & Public Records Rules, 1997