## **SYLLABUS**

# (PAPER – II)

### Subject:

## LIBRARY AND INFORMATION SCIENCE (CODE NO.: 59)

#### UNIT – I

- 1. Data, Information, Knowledge and Wisdom.
- 2. Information Life Cycle Generation, Collection, Storage and Dissemination.
- 3. Role of Information in Planning, Management, Socio-economic, Cultural, Educational and Technological Development.
- 4. Information Science Relationship with other subjects, Information Society and Knowledge Society.
- 5. Communication Concept, Types, Theories, Models, Channels and Barriers; Trends in Scholarly Communication.
- 6. Information Industry Generators, Providers and Intermediaries.
- 7. IPR and Legal Issues Categories, Conventions, Treaties, Laws.
- 8. Plagiarism: Concept and Types.
- 9. Right to Information Act (RTI); Information Technology Act.
- 10. National Knowledge Commission; National Mission on Libraries.

#### UNIT – II

- 1. Historical Development of Libraries in India; Committees and Commissions on Libraries in India.
- 2. Types of Libraries Academic, Public, Special and National.
- 3. Library Legislation and Library Acts in Indian States; The Press and Registration of Books Act; The Delivery of Books and Newspapers (Public Libraries) Act.
- 4. Laws of Library Science.
- 5. Library and Information Science Profession Librarianship as a Profession, Professional Skills and Competences; Professional Ethics.

- Professional Associations National ILA, IASLIC, IATLIS; International
  IFLA, ALA, CILIP, ASLIB, SLA; Role of UGC, RRRLF and UNESCO in Promotion and Development of Libraries.
- 7. Library and Information Science Education in India.
- 8. Library Public Relations and Extension Activities.
- 9. Type of Users User Studies, User Education.
- 10. Information Literacy Areas, Standards, Types and Models; Trends in Information Literacy.

#### UNIT – III

- 1. Information Sources Nature, Characteristics, Types and Formats.
- 2. Sources of Information Primary, Secondary and Tertiary; Documentary and Non-Documentary.
- 3. Primary Information Sources (Print and Electronic) Journals, Conference Proceedings, Patents, Standards, Theses & Dissertations, Trade Literature.
- 4. Secondary Information Sources (Print and Electronic) Dictionaries, Encyclopedias, Bibliographies, Indexing & Abstracting, Statistical sources, Handbooks and Manuals.
- 5. Tertiary Information Sources (Print and Electronic)- Directories, Year Books, Almanacs.
- 6. Reference Sources Bibliographical, Biographical, Educational, Language and Geographical.
- 7. Electronic Information Resources Subject Gateways, Web Portals, Bulletin Boards, Discussion Forums /Groups.
- 8. Databases: Bibliographic, Numeric, Full text, Multimedia; Open Access Databases.
- 9. Institutional and Human Resources.
- 10. Evaluation of Reference Sources and Web Resources.

#### UNIT - IV

- 1. Community Information Services.
- 2. Reference Service Concept and Types; Referral Services
- 3. Alerting Services CAS, SDI, Inter Library Loan and Document Delivery.
- 4. Mobile based Library Services and Tools Mobile OPAC, Mobile Databases, Mobile Library Website, Library Apps, Mobile Library Instructions, Augmented Reality, SMS Alerts, Geo-Location, Reference Enquiry.
- 5. Web 2.0 and 3.0 Library 2.0- Concept, Characteristics, Components; Instant Messaging, RSS Feeds, Podcasts, Vodcasts, Ask a Librarian
- 6. Collaborative Services- Social Networks, Academics Social Networks, Social Tagging, Social Bookmarking.



- 7. Web Scale Discovery Services
- 8. National Information Systems and Networks: NISCAIR, DESIDOC, SENDOC, ENVIS, INFLIBNET, DELNET, NICNET, ERNET, National Knowledge Network (NKN), Biotechnology Information System Network
- 9. International Information Systems and Networks: INIS, AGRIS, INSPEC, MEDLARS, BIOSIS, ERIC, Patent Information System (PIS), Biotechnology Information System (BIS).
- 10. Library Resource Sharing and Library Consortia National and International.

#### UNIT - V

- 1. Universe of Knowledge Nature and Attributes; Modes of Formation of Subjects.
- Knowledge Organisation Classification Theories, Cannons, and Principles; Simple Knowledge Organisation System (SKOS), Taxonomies, Folksonomy, Trends in Classification.
- 3. Mapping of Subjects in Library Classification Schemes DDC, UDC and CC.
- Knowledge Organisation: Cataloguing Cannons and Principles; Centralized and Co-operative Catalogue; Library Cataloguing Codes: CCC and AACR - II.
- 5. Standards of Bibliographic Record Formats and Description ISBD, MARC 21, CCF, RDA, FRBR, Bib frame.
- Standards for Bibliographic Information Interchange & Communication – ISO 2709, Z39.50, Z39.71.
- 7. Metadata Standards: Dublin Core; MARC21, METS, MODES, EAD.
- 8. Indexing Systems and Techniques: Assigned Pre-coordinate; Post-Coordinate; Derived- Title-based; Vocabulary Control.
- 9. Abstracting Types and Guidelines.
- 10. Information Retrieval System Features, Components, Models and Evaluation.

#### UNIT - VI

- 1. Management Principles, Functions and Schools of thought.
- Library and Information Centers Management Book Selection Tools and Principles; Library Acquisition, Technical Processing, Circulation, Serial Control, Maintenance and Stock Verification; Preservation and Conservation; Hazards and Control Measures of Library Materials.
- 3. Human Resource Management Planning, Job Analysis, Job Description, Job Evaluation, Selection, Recruitment, Motivation, Training and Development, Performance Appraisal; Staff Manual.



- 4. Financial Management in Libraries Sources of Finance, Resource Mobilisation, Budgeting Methods; Cost Effective and Cost Benefit Analysis, Annual Reports & Statistics; Library Authority and Committee.
- 5. Project Management SWOT, PEST, PERT / CPM.
- 6. Total Quality Management (TQM) Concepts, Principles and Techniques, Six Sigma; Evaluation of Services of Libraries and Information Centers.
- 7. Library Building, Furniture and Equipment; Green Library Building; Information Commons; Makers Space; Security and Safety.
- 8. Management Information System (MIS), MBO, Change Management, Disaster Management, Crisis Management.
- 9. Knowledge Management Principles, Tools, Components and Architecture.
- 10. Marketing of Library Products and Services Plan, Research, Strategies, Mix, Segmentation, Pricing and Advertising; Management Consultancy.

#### UNIT - VII

- 1. Computer Technology Character Representation (ASCII, ISCII, Unicode); Computer Hardware, Software; Storage Devices; Input and Output Devices.
- 2. Types of Software System Software, Application Software.
- 3. Programming Languages Object Oriented, Procedural, High Level, Scripting; Web Languages.
- 4. Telecommunication Transmission Channels, Mode, and Media, ISDN, PSDN, Multiplexing, Modulation, Standards and Protocols.
- 5. Wireless Communication Media, Wi-Fi, Li-fi, Satellite Communication, Mobile Communication.
- 6. Computer Networks Topologies, Types of Networks LAN, MAN, WAN.
- 7. Internet Web browsers, WWW, E-mail; Search Engines, Meta and Entity Search engines.
- 8. Internet Protocols and Standards HTTP, SHTTP, FTP, SMTP, TCP/IP, URI, URL.
- 9. Hypertext, Hypermedia, Multimedia, Video conferencing, Virtual Reality, Augmented Technologies.
- 10. Data Security, Network Security, Firewalls, Cryptographic Techniques, Anti-virus software, Anti-spyware, Intrusion Detection System.

#### UNIT – VIII



- 1. Library Automation Areas, Planning, Selection of Hardware and Software, Implementation and Evaluation; Standards for Library Automation.
- 2. Barcode, RFID, QR Code, Biometric, Smartcard: Features and Applications.
- 3. Digitization Planning, Selection of Materials, Hardware, Software, Process, Issues.
- 4. Digital Library: Genesis, Characteristics, Types, Architecture; Standards, Formats and Protocols, DOI.
- 5. Digital Preservation Need, Purpose, Standards, Methods, Techniques, Projects (National and International).
- 6. Digital Library Initiatives National and International.
- 7. Institutional Repositories Need, Purpose, Types and Tools; Institutional Repositories in India; ROAR, DOAR, SHARPA-ROMIO.
- 8. Content Management Systems Architecture, Data Integration, CMS Software Selection, Implementation and Evaluation.
- 9. Application of Artificial Intelligence, Expert Systems and Robotics in Libraries; Social Mobile Analytics Cloud (SMAC); Cloud Computing.
- 10. Ontology Tools (RDF, RDFS, Potege); Semantic Web, Linked Data, Big Data, Data Mining, Data Harvesting.

#### UNIT – IX

- 1. Research Concept, Purpose, Functions, Scope and Ethics; Types of Research Basic and Applied, Interdisciplinary and Multidisciplinary.
- 2. Research Methods: Historical, Descriptive, Experimental and Delphi.
- 3. Research Design Selection of Research Problem, Review of Literature; Formulation of Research Problem; Hypothesis – Formulation, Types and Testing; Sampling Techniques.
- 4. Methods of Data Collection: Questionnaire, Interview, Observation, Library Records, Scales and Checklist.
- 5. Data Analysis and Interpretation Presentation of Data; Statistical Methods/ Techniques.
- 6. Statistical Packages Spreadsheet, SPSS, Bibexcel, 'R' Statistics.
- Research Report Writing and Citation Tools Structure, Style, Contents, Guidelines; Style Manuals; Online Citation Tools; Reference Style Management Tools; Anti-plagiarism Tools; Evaluation of Research Report.
- 8. Metric Studies in LIS Bibliometrics, Scientometric, Webometrics, Altmetrics;
- 9. Impact Factors Journal, Institutional and Authors; h-Index, g-Index, i10 Index.
- 10. Trends in Library and Information Science Research.



#### UNIT –X

- 1. Academic Library and Information System.
- 2. Public Library and Information System.
- 3. Special Library and Information System.
- 4. Health Science Library and Information System.
- 5. Corporate Library and Information System.
- 6. Agricultural Library and Information System.
- 7. Engineering and Technological Library and Information System.
- 8. Archive, Museums and Oriental Libraries.
- 9. Community Information System.
- 10. Information Services and System for Persons with Disability, Children and Women.

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