

## **CPT 1.1 FOUNDATION OF LIBRARY AND INFORMATION SCIENCE**

<b>Unit 1</b>	Libraries in Social Context, Social and historical foundations of library, Role of libraries in formal and information education, Different types of libraries: functions, objectives and activities, Five laws of library science and their implications. Library outreach.
<b>Unit 2</b>	Library Development, History of Library movement, Growth and development of libraries in India, Library cooperation, resource sharing, networking and consortia.
<b>Unit 3</b>	Information and Communication, Information - characteristics, nature and use, Conceptual differences between Data, Information, Knowledge, Information transfer cycle: Generation, collection, storage and retrieval, Information communication: channels, models and barriers
<b>Unit 4</b>	Information Science, Evolution. Definitions. Scope and current status. Information Science as a discipline. Influence of Information Science as a other discipline.
<b>Unit 5</b>	Library Legislation – need and importance, Library legislation in India - study of Model public library bill of S. R. Ranganathan, Karnataka Public Library Act, 1965, Intellectual Property Rights: Copyright Act, Delivery of books and Newspaper (Public libraries) Act, Right to information Act
<b>Unit 6</b>	Library Profession and Professional associations, Attributes of profession: Librarianship as a profession, professional ethics in Librarianship, LIS education and research in India, Professional Associations: regional level - KALA, National level – ILA, IATLIS, IASLIC, International level - IFLA, ALA, CILIP

### **Selected Readings:**

1. Burahohan, A. (2000). Various aspects of librarianship and Information Science. New Delhi: ESS ESS.
2. Chapman, E.A. and Lynden, F.C. (2000). Advances in librarianship. 24th Vol. San Diego: Academic Press.
3. Isaac, K.A. (2004). Library legislation in India: A critical and comparative study of state Library acts book description: New Delhi: Ess Ess Publication.
4. Kumar, P.S.G.(2003) Foundations of Library and Information Science. Paper I of UGC Model Curriculum. New Delhi: Manohar.

5. Kumar, P.S.G. (1997). Fundamentals of Information Science. Delhi: S. Chand.
6. Ranganathan, S.R. (1999). The Five Laws of Library Science, 2nd Ed., Bangalore: Sarada Ranganathan Endowment for Library Science.
7. Richard E.R. (2000). Foundations of Library and Information Science. Neal-Schuman.
8. Rout, R.K. Ed. (1999) Library legislation in India. New Delhi: Reliance.
9. Rudinow, J. & Graybosch, A. (2000). Ethics & Values in the Information Age. NY.
- 10 Sadhu, S.N. & Saraf, B.N. (1967). Library legislation in India. Delhi: Sagar, 1967.
- 11 Sen B.K. (2002). Five laws of Library Science? IASLIC Bulletin, 47(3), p.121-140.
- 12 Sharma, P. S.K.( 1992). Library and society. 2 Ed. Delhi: ESS ESS.
- 13 Surendra S. & Sonal Singh. Ed. (2002).Library, Information and Science and society. New Delhi: ESS ESS.

## CPT-1.2. INFORMATION SOURCES

<b>Unit- 1</b>	Information sources: Meaning, Definition, Evolution, Characteristics, Functions, Importance, and Criteria for evaluation
<b>Unit-2</b>	Primary sources of Information: Periodicals, conference proceedings, technical reports, patents, standards and specifications, trade literature,
<b>Unit-3</b>	Secondary sources- Dictionaries, Encyclopedias, Yearbooks and Almanacs, Biographical sources, Geographical sources, Bibliographical sources, Abstracting and Indexing periodicals, Handbooks and Manuals and Statistical Information sources.
<b>Unit-4</b>	Tertiary sources - Directories, Guides to reference sources, Bibliography of bibliographies, Union Catalogues, etc.
<b>Unit-5</b>	Human Sources: Technological gatekeepers, Invisible colleges, Information consultants, Experts/ Resource persons, Representatives of firms, Personal home pages, common men (priest, village head, postman, receptionist, etc.). Institutional / Organisational Sources: Government, Ministries and departments, R& D organizations, Learned societies, Publishing houses, Press, Broadcasting stations, Data banks, Information analysis centers, Referral centers, Exhibitions & trade fairs. Institutional web sites.
<b>Unit-6</b>	Electronic sources: Internet Information resources, Databases. E-books, Open Access Resources. Online forums, Subject gateways. Wikipedia, ACM digital Library, IEEE / IEE Electronic Library Online (IEL), Emerald, EBSCO, Elsevier Science, PubMed Central, J-Gate, Web of Science, SCOPUS, SciFinder Scholar, PLOS, DOAJ, etc.)

### **Selected Readings:**

1. Chowdhury, G. G. and Sudatta Chowdhury(2001). Searching CD-ROM and Online Information Sources. London : Facet Publishing.
2. Chowdhury, G. G. and Sudatta Chowdhury(2001). Information Sources and Searching on the World Wide Web. London: Facet Publishing.
3. Krishna Kumar (2003). Reference service, Ed.3, New Delhi: Vikas.
4. Kumar (PSG). Ed.(2001). Indian encyclopedia of Library and Information Science. New Delhi : S. Chand & Co.
5. Rao, I.K.R(2001). Electronic sources of Information. Bangalore: DRTC.s
6. Sewasinh (2001). Hand book of international sources on reference and Information. New Delhi: Crest Publication.
7. Sharma, J.S & Grover, D.R (1998). Reference service and sources of Information. New Delhi: ESS ESS.
8. Subramanayam, K. (1981). Scientific and technical Information resources. New York : Marcel Dekkar.

### CPT 1.3: LIBRARY CATALOGUING

<b>Unit 1</b>	Introduction to Organization of Information Resources: Catalogues, Indexes, Bibliographies, Evolution of Catalogue codes from Panizzi to AACR - II / RDA.
<b>Unit 2</b>	Document description –significance; Document Cataloguing: Meaning, objectives and functions
<b>Unit 3</b>	Forms of document Cataloguing - Inner forms and Outer forms.
<b>Unit 4</b>	Subject Cataloguing - Chain Procedure; Subject heading lists- Sear's list, LCSH. Normative Principles: Laws, Canons and Principles.
<b>Unit 5</b>	Standards for Bibliographic description: MARC, ISBD, UNIMARC, CCF, ISO 2709, Metadata and Dublin-Core
<b>Unit 6</b>	Resource sharing - centralized, co-operative and Union cataloguing, OPAC, OCLC and its activities; Consortia

#### Reading List:

1. Ranganathan, S.R. Classified Catalogue Code, EdS, SRELS, 1989 (Reprint)
2. Girija kumar and Krishna Kumar: Theory of Library cataloguing. New Delhi, Vikas, 1983.
3. Viswanathan, C G cataloguing theory and practice. 1990.
4. Anglo- American Cataloguing Rules, Ed2 1986.
5. Allison Kaplan, Crash Course in Cataloging for Non-Catalogers: A Casual Conversation on Organizing Information, Libraries Unlimited, February 17, 2009.
6. Mary L. Kao, Cataloging and Classification for Library Technicians, Second Edition, The Haworth Press; 2nd edition (February 15, 2001).
7. Anne Welsh and Sue Batley, Practical Cataloging: AACR2, RDA and MARC21, Neal-Schuman Publishers; 1 edition (April 30, 2012)
8. Sheila S. Intner, Beginning Cataloging, Libraries Unlimited; 1 edition (September 23, 2009), ISBN-10: 1591588391, ISBN-13: 978-1591588399
9. Sam Oh, Ontology-based Metadata Systems: Design and Implementation (Third Millennium Cataloging), Publisher: Libraries Unlimited (December 30, 2013),

10. Priscilla Caplan, *Metadata Fundamentals for all Librarians*, ALA Editions; 1 edition (April 1, 2003),
11. Steven J. Miller, *Metadata for Digital Collections (How-to-Do-It Manual) (How to Do It Manuals for Librarians)* , Neal-Schuman Publishers; Pap/Psc edition (May 31, 2011),
12. Philip Hider, *Information Resource Description: Creating and Managing Metadata*, Amer Library Assn (December 31, 2012)
13. Rebecca Lubas (Author), Amy Jackson (Author), Ingrid Schneider, *The Metadata Manual: A Practical Workbook (Chandos Information Professional Series)*, Chandos Publishing; 1 edition (August 14, 2013),
14. Jia Liu, *Metadata and Its Applications in the Digital Library: Approaches and Practices*, Libraries Unlimited (July 30, 2007)
15. Richard Smiraglia, *Metadata: A Cataloger's Primer*, Routledge (November 19, 2005)
16. Barbara Tillett and Ana Lupe Cristán, *IFLA Cataloguing Principles: The statement of International Cataloguing Principles (ICP) and its Glossary*. In *20 Languages (Ifla Series on Bibliographic Control)*, K. G. Saur Verlag; 1 edition (July 29, 2009).

## SPT-1.4A : COMPUTER BASICS

<b>Unit- 1</b>	Information Technology: Meaning, Definition, Scope and Evolution, Computers: Concept, Types, Generation, Capabilities and limitations
<b>Unit-2</b>	-Computer Hardware: Components of a Computer; Memory - Internal Storage: ROM and RAM, External Storage Devices: Magnetic Devices - Hard Disk and Floppy Disk; Optical Devices, CD, DVD; Pen drive; Input/output Devices.
<b>Unit-3</b>	Computer Software: Systems Software - Compilers and Interpreters; Operating Systems: MS-DOS, MS-WINDOWS, Application Software Package: MS Office - Word, Excel and PowerPoint
<b>Unit-4</b>	Data Representation and Data Manipulation: Data Representation-Bits, Bytes, Codes-BCD, EBCDIC & ASCII. Number system Binary: Addition- Subtractions, Logic gates: AND, OR, NOT, NAND, NOR
<b>Unit-5</b>	Programming, Algorithms, Flow-Charting; Basic programming languages: C, C++, Java, HTML
<b>Unit-6</b>	File Organization- Concept, Types and their advantages and disadvantages

### Selected Readings:

1. Bansal, S.K.(2005). Information technology and globalisation, New Delhi: A.P.H. Publishing corporation.
2. Basandra , S.K(2002). Computers today, New Delhi: Golgotia.
3. Curtin, D.P. & others: Information technology: The breaking wave. New Delhi: TMH, Latest Edition.
4. Decson, E.(2000). Managing with Information technology. Great Britan: Koganpage Ltd.
5. Dhiman, A.K.(2003). Basics of Information technology for librarians and Information scientists, Vol.1. New Delhi: ESS ESS.
6. Hunter & Shelly (2002). Computers and common sense, New Delhi: Prentice-Hall.
7. Kashyap, M.M. (2003). Database systems. New Delhi: Vikas.
8. Satyanarayana, R. (2005).Information technology and its facets. Delhi: Manak

## SPT 1.4B: INFORMATION LITERACY

<b>Unit 1</b>	Basics of Information Literacy, Information literacy: Meaning, Definition, Need, Importance Historical perspective of Information literacy. User education to information literacy
<b>Unit 2</b>	Types of Information Literacy, Types of Information Literacy: Library Literacy, Technology literacy, media literacy, computer and digital literacy.
<b>Unit 3</b>	Information literacy Models and Standards, Models of Information literacy: SCONUL model and Empowering 8 model. B-6, Seven Pillar, ELLIS. Guidelines and standards for Information literacy programs: ALA, IFLA ACRL. Taskforces and forums.
<b>Unit 4</b>	Information Literacy and higher education, Information Literacy and Higher Education; Role of Libraries in Information literacy. Information literacy in India, LIS profession.
<b>Unit 5</b>	Information Literacy methods, Information Literacy Competencies, Challenges of Information literacy. Information literacy instructions in different types of Library and Information centers. Biblion.
<b>Unit 6</b>	Trends in Information Literacy, Current trends in Information literacy. Information Literacy and Life long learning, Study of Information literacy programs in the world including India.

### Selected Readings:

1. American Library Association. Final Report of Presidential Committee on Information Literacy. [www.ala.org/at/nill/litt1sthtml](http://www.ala.org/at/nill/litt1sthtml)
2. Barker, K. and Lonsdale, R. Ed. (1994). Skills for life: the value and meaning of literacy. London: Taylor Graham.
3. Bawden, D.(2001). Information and digital literacies: a review of concepts.  
<http://gti/edu.um.es.8080/gomez/hei/intranet/bawden/pdf>.
4. Eisenberg, M.B. , Lowe, C.A. & Spitzer, K.L. (2004). Information literacy: Essential skills for Information age. London: Libraries unlimited.

5. Meadows, A.J. Ed. (1991). Knowledge and communication: essays on the Information chain. London: Library Association.
6. Pantry, Sheila and Griffiths, Peter (2002). Creating a successful e-Information service. London: Facet.
7. Zorana Ercegovac (2008). Information literacy: search strategies, tools & resources for high school students and college freshmen. California: ABC-CLIO.

### **CPP – 1.5: INFORMATION SOURCES**

Acquaintance with various sources of information (Primary, Secondary, Tertiary, Electronic sources of information)  
(Each student shall compulsory maintain practical record and submit the same at the time of practical examination).

### **CPP – 1.6 : CATALOGUING OF BOOKS**

Cataloguing of simple documents according to AACR-2 and assign subject headings using at least one standard list of subject headings.  
(Each student shall compulsory maintain practical record and submit the same at the time of practical examination).

### **CPP – 1.7 : CATALOGUING OF NON-BOOK MATERIALS**

Cataloguing of Non-Book materials according to AACR-2 and assign subject headings using at least one standard list of subject headings.  
(Each student shall compulsory maintain practical record and submit the same at the time of practical examination).

### **SPP-1.8A: COMPUTER BASICS**

Acquaintance with Operating Systems, Word Processing, Spreadsheets, Presentation Package including hands on experience and work assignment.  
(Each student shall compulsory maintain practical record and submit the same at the time of practical examination).

### **SPP-1.8B: INFORMATION LITERACY**

Application of B-6 skills in problem solving.  
(Each student shall compulsory maintain practical record and submit the same at the time of practical examination).

## CPT 2.1 MANAGEMENT OF LIBRARIES AND INFORMATION CENTERS

<b>Unit 1</b>	Management, Concepts, Definition and scope, Management Schools of Thought Functions and principles of Scientific Management and its application to Library and Information Center, Organizational Structure
<b>Unit 2</b>	Library House keeping operations, Different sections of Library and information centers: Acquisition Section, Technical Section, Circulation Section, Periodical Section, Reference and Customer care Service, Need mapping. Collection Management: Book Selection policies and principles for print and electronic resources; Acquisition, technical processing, Stock Verification, Weeding of resources, Conservation and preservation of Library Resources
<b>Unit 3</b>	Human Resource Management, HRM: Meaning, Definitions, Need and importance. Organizational structure, Recruitment Process, Job Analysis and description, Job evaluation, motivation, Education training and development, Job evaluation, Performance Appraisal, MBO.
<b>Unit 4</b>	Financial Management, Importance, Sources of Finance, Financial Resources mobilization, Budgeting methods and techniques: PPBS, ZBB etc... Budgetary control, Information economy, Cost effectiveness, Cost benefit analysis (PERT), out sourcing
<b>Unit 5</b>	Physical facilities and Library Records Management, Building, Furniture and equipments, Library committees: library rules and regulations, library statistics, Annual reports
<b>Unit 6</b>	Personality Development Skills, Communication Skills: Speaking; Writing; Presentation; Time Management; International Perspectives for Information Professionals

### Selected Readings:

1. Kumar, P.S.G. (2003). Management of Library and Information Centres. Delhi: B. R. Publishing corporation.
2. Mahapatra, P.(1997). Library management. Calcutta: World Press.
3. Mittal, R.L. (1984).Library administration: Theory and practice. 4 Ed. New Delhi: Metropolitan.

4. Paliwal, P.K. (2000). Compendium of Library administration. New Delhi: ESS ESS.
5. Paranjpe, V. (1997). Strategic human resource management. New Delhi: Allied.
6. Parker, C. and Café, T.(1993). Management Information systems: Strategy and action. New York: McGraw Hill.
7. Pearson, R.J. Ed.(1983). Management process: Selection of readings for librarians. Chicago: ALA.
8. Ranganathan, S.R. (1954). Library administration. Bangalore: Sharada Ranganathan Endowment for Library Science.
9. Siwatch, A. S.(2004). Library management: Leadership style strategies and organizational climate. New Delhi: Shree.
10. Stuert, R.D. and Moran, B.B.(2004). Library and Information center management. Colorado: Libraries Unlimited

## **CPT-2.2: LIBRARY CLASSIFICATION**

<b>Unit-1</b>	Library Classification: Definition, meaning, objectives, need and purpose. Evolution of theory of Classification: Descriptive and Dynamic theory. Knowledge Classification; Book Classification; Species of Library Classification.
<b>Unit-2</b>	Universe of Knowledge: concept, definition, Structure, attributes. Modes of formation of Knowledge, Different types of Subjects, Universe of Knowledge as mapped in CC; DDC & UDC.
<b>Unit-3</b>	Planes of work and Canons of Classification. Normative Principles of Classification and their Application.
<b>Unit-4</b>	Fundamental Categories; Principles for Facet sequence; Phase relations, Common Isolates.
<b>Unit-5</b>	Notational System: Need; Functions; Types; Qualities. Devices used in CC. Mnemonics; Call Number; Systems and Specials; Rounds and Levels; Method of Residue.
<b>Unit-6</b>	Classification Schemes: Standard Schemes of Classifications and their features: CC; DDC; UDC. Major contributions of SR Ranganathan to classification theory; Design and Development of Schemes of Library Classification. Trends in Library Classification.

### **Selected Readings:**

1. Ranganathan, S.R.: Prolegomena to Library Classification. Bangalore, SRELS, 1989.
2. Krishnakumar: Theory of Library Classification, New Delhi, Vikas, 1989.
3. Ranganatha, S.R.: Colon Classification, Ed6, SRELS, 1985 (Reprint).
4. Rosket, A.C.: Subject approach to information, Ed 5, 1991.
5. Maltby, A: Sayer's Manual of Library Classification. London:Clive Bingley, 1966.

### SPT-2.3A: LIBRARY AUTOMATION

<b>Unit- 1</b>	Library Automation: Meaning and Definitions, Genesis, History, Need and Areas of Library Automation
<b>Unit-2</b>	Strategies for Library Automation: Factors - Internal and External, Prerequisites, Library Automation Tasks
<b>Unit-3</b>	Infrastructure Requirements for library automation: Manpower, Hardware, Software, Cost, Physical, Equipment and Furniture
<b>Unit-4</b>	Automation of House Keeping Operations: Acquisition, Cataloguing, Circulation and Serials Control. Subsystems and Interface, File and Data Structure.
<b>Unit-5</b>	Application of Barcode and RFID Technology for Library Functions. Application of Artificial Intelligence to Library and Information Centres. Retrospective Conversion: Strategies and Techniques
<b>Unit-6</b>	Library Automation Software Packages: SOUL, Libsys, NewgenLib, Koha, Criteria for Evaluation

#### Selected Readings:

1. Dhiman, A.K.(2003). Basics of Information technology for librarians and Information scientists. ESS ESS .
2. Haravu, L.J.(2004). Library automation: design, principles and practice. London: Allied publishing.
3. Kumar, P.S.G. (2004). Information technology: Applications (Theory and Practice). Delhi: B.R. Publishing.
4. Lucy, A. T.(2005). An introduction to computer based Library system. 3rd Ed. Chichester: Wiley.
5. Ravichandra Rao (1996). Library automation. New Delhi: New Age International.
6. Kochar, R. S. (2007). Library Automation: Issues and Principles. New Delhi: APH Publishing Corporation.
7. Rajinder Singh Aswal (2006). Library Automation for 21st Century, New Delhi:EssEss Publication.

### SPT-2.3B: INFORMATION SYSTEMS AND PROGRAMMS

<b>Unit-1</b>	Information Services: Need, Importance, Definitions; Reference Service: Concept, Definition. Types: SDI, CAS, Translation and DDS, Referral Service, Indexing and Abstracting Service.
<b>Unit-2</b>	Information Users and their needs; Categories of information users; User studies -Need, scope, purpose and objectives and importance; Methods and techniques of user study. User Education: Definition; need; Objectives; Technique and methods of user education programme. Information seeking behaviour.
<b>Unit-3</b>	Information systems: Basic concepts, Meaning, objectives and functions. Structure, Functions and services of: Libraries, Documentation centers, Information Centers, Information Analysis Centers, Clearing Houses, Archives, Referral and Translation Centers.
<b>Unit-4</b>	Study of National Information Systems and programs NISCAIR, ENVIS, DESIDOC, NASSDOC
<b>Unit-5</b>	Study of International Information Systems and programs INSPEC, PUBMED, ISI, AGRIS, CAS, SCOPUS, DOAJ, EBSCO, ERIC
<b>Unit-6</b>	Virtual reference Service: Desk service/vitual library service. Development of computer based information services. Online Information Services.

#### Selected Readings:

1. Gupta, B.M. and others(1991). Handbook of Libraries, archives, Information centres in India. New Delhi: Aditya Prakshan.
2. Krishan Kumar (1990). Reference service. New Delhi, Vikas.
3. Lucas, Amy. Ed.(1989). Encyclopaedia of Information systems and services. Detriot: Gale Research.
4. Neelameghan A. and Prasad, K.N. Eds. (2005). Information systems and services in India. Bangalore: SRELS.
5. Vickery, B.(1987). Information systems. London: Butterworths.

## OEPT-2.4. FUNDAMENTALS OF COMPUTERS

<b>Unit- 1</b>	Computers: Concept, Types, Generation, Capabilities and limitations
<b>Unit-2</b>	Computer Hardware: Components of a Computer; Memory - Internal Storage: ROM and RAM, External Storage Devices: Magnetic Devices - Hard Disk and Floppy Disk; Optical Devices - CD, DVD; Pen drive; Input/output Devices.
<b>Unit-3</b>	Computer Software: Systems Software - Compilers and Interpreters; Operating Systems: MS-DOS, MS-WINDOWS, Application Software Package: MS Office - Word, Excel and PowerPoint
<b>Unit-4</b>	Data Representation and Data Manipulation: Data Representation- Bits, Bytes, Codes-BCD, EBCDIC & ASCII. Binary number system, calculations- Addition- Subtractions
<b>Unit-5</b>	Programming and File organization: Algorithms, Flow-Charting; Basic programming languages: C, C++, Java, HTML
<b>Unit-6</b>	File Organization- Concept, Types and their advantages and disadvantages

### Selected Readings:

1. Bansal, S.K.(2005). Information technology and globalisation, New Delhi: A.P.H. Publishing corporation.
2. Basandra , S.K(2002). Computers today, New Delhi: Golgotia.
3. Curtin, D.P. & others: Information technology: The breaking wave. New Delhi: TMH, Latest Edition.
4. Decson, E.(2000). Managing with Information technology. Great Britan: Koganpage Ltd.
5. Dhiman, A.K.(2003). Basics of Information technology for librarians and Information scientists, Vol.1. New Delhi: ESS ESS.
6. Hunter & Shelly(2002). Computers and common sense, New Delhi: Prentice-Hall.
7. Kashyap, M.M. (2003). Database systems. New Delhi: Vikas.
8. Satyanarayana, R. (2005).Information technology and its facets. Delhi: Manak.

## **CPP-2.5: MANAGEMENT OF LIBRARIES AND INFORMATION CENTERS**

Acquaintance and hands on experience with Table of Contents (ToC) Service; Information Retrieval Service; Preparation of bibliography; Literature Search Service; Allocation of Library Budget.

(Each student shall compulsory maintain practical record and submit the same at the time of practical examination).

## **CPP-2.6: LIBRARY CLASSIFICATION**

Classification of Documents according to DDC (depending on the availability).

(Each student shall compulsory maintain practical record and submit the same at the time of practical examination).

## **SPP-2.7A: LIBRARY AUTOMATION**

Installation, configuration and working with any one library automation software (depends on the availability)

(Each student shall compulsory maintain practical record and submit the same at the time of practical examination).

## **SPP-2.7B: INFORMATION SYSTEMS AND PROGRAMMS**

Acquaintance with the Abstracting services; Newspaper clippings (both online and offline); CAS; SDI.

(Each student shall compulsory maintain practical record and submit the same at the time of practical examination).

## **OEPP-2.8: FUNDAMENTALS OF COMPUTERS**

Acquaintance with Operating System; Word Processing; Spreadsheet; Presentation Packages including Word.

(Each student shall compulsory maintain practical record and submit the same at the time of practical examination).

### **CPT-3.1: INFORMATION PROCESSING AND RETRIEVAL**

<b>Unit- 1</b>	Information processing and Retrieval: Meaning, Definition, Functions, components. Information transfer cycle.
<b>Unit-2</b>	Indexing: Concepts, theories, methods and importance. Indexing as profession, Indexing languages: Vocabulary control, Semantics and Syntax, Thesaurus: Definition, importance, Design and construction
<b>Unit-3</b>	Indexing system: Pre-coordinate indexing and post coordinate, PRECIS, POPSI, KWIC and its variations, UNITERM Indexing, Citations indexing, Google scholar, Web of science, Scopus
<b>Unit-4</b>	Bibliographic description: Concept, Historical development, Standards for Bibliographic record format-ISBD, MARC-21, ISO-2709, CCF
<b>Unit-5</b>	Bibliographic control: concepts, historical development, International bibliographical control: Role of International organizations, standards and cooperation's
<b>Unit-6</b>	Evaluation of indexing system: Criteria- Recall, precision, currency, ease of use, exhaustively. Evaluation studies: ASLib cranfield Project, MEDLARS

#### **Seleted Readings:**

1. Atchison, J. & Gilchrist, A.(1972). Thesaurus construction: a practical manual. London: Aslib.
2. Austin, D.(1984). PRECIS: A manual of concept analysis and subject Indexing. 2nd ed.
3. 6. Chowdhruy, G.G.(2003). Introduction to modern Information retrieval. 2nd Ed. London, Facet Publishing.
4. Cleaveland, D. B.(2001). Introduction to Indexing and abstracting. 3rd Ed. Englewood, Colo. : Libraries Unlimited
5. Ghosh, S.B. and Biswas, S.C. (1998). Subject Indexing systems: Concepts, methods and techniques. Rev. ed. Calcutta: IASLIC.

6. Lancaster, F.W.(2003).Indexing and Abstracting in Theory and Practice. London: Facet Publishing.
7. Pandey, S.K. Ed.(2000).Library Information retrieval. New Delhi: Anmol.
8. Van, R.C. J.(1970). Information retrieval. 2nd ed. London: Butterworths.

### **CPT-3.2: DIGITAL LIBRARIES**

<b>Unit 1</b>	Digital Libraries: Concepts, Evolution of digital libraries- study of digital library initiatives and Organizations contributing to development of DL. Digital library conferences- JCDL, ECDL and ICADL
<b>Unit 2</b>	Design and development of digital library: digital library architecture, Interoperability, Compatibility, Protocols, standards and User Interfaces
<b>Unit 3</b>	Digital Content creation – Electronic documents, files and file formats. Study of different file formats. PDF: features, creating of PDF files. Born digital and legacy documents. Digitization-scanning, OCR Scholarly communication, E-journals and e-books Digital Preservation, Conservation and Archiving
<b>Unit 4</b>	Digital content management: DOI, OpenURL, CrossRef and other aspects. Metadata and resource discovery issues. Access Control and DRM, Security and preservation issues.
<b>Unit 5</b>	Digital library software: study of DL software: Greenstone, DSpace, EPrints. Comparative evaluation
<b>Unit 6</b>	Open Access Movement and Institutional repositories. study of select digital Libraries and IRs. California Digital Library; Alexandria Digital Library; Vidyanidhi, Shodhganga

#### **Selected Readings:**

1. C.Xaiver. World Wide Web Design with HTML, New Delhi: TMH, 2000.
2. G.G. Chowdury. Introduction to Digital Libraries. London: Facet Publishing, 2003.
3. John M. Cohn, Ann L. Kelsey and Ketih Micheal Fiels, Planning for Library Automation: A Practical Handbook. London: Library Association, 1998.
4. Kausik Bose Information Networks in India: Problems and Prospects. New Delhi: Ess Ess, 1994.
5. Paul Pedley. The invisible Web: Searching the hiddent parts of the Internet. London: Aslib, 2001.

### SPT-3.3A: RESEARCH METHODOLOGY

<b>Unit-1</b>	Research: Concept, Meaning, Need and Process of Research; Types of Research – Fundamental and Applied including inter disciplinary and multidisciplinary approach; Role of Research in the Development of Scholarship.
<b>Unit-2</b>	Research Design: Conceptualization and Operationlisation; Types of Research Design; Identification and Formulation of problem; Hypotheses- Nominal and Operational Definition; Designing Research Proposal; Ethical aspects of Research; Literature search – print, non-print and electronic sources.
<b>Unit-3</b>	Research Methods: Scientific Method; Historical Method; Descriptive Method; Survey Method and Case Study Method; Experimental Method, Delphi Method and Participatory research.
<b>Unit-4</b>	Research Techniques and Tools: Questionnaire; Schedule; Interview; Observation; Scales and check lists; Library and Record and Reports; Sampling Techniques.
<b>Unit-5</b>	Data Analysis and Interpretation: Descriptive Statistics – Measure of Central Tendency; Mean, Mode, Median, Tabulation and Generalization; Standard Deviation; Graphical presentation of data – Bar, pie, line-graphs, Histograms.
<b>Unit-6</b>	Research Reporting: Structure, Style, Contents; Guidelines of Research Reports; Style Manual – Chicago – MLA-APA etc.; E-Citation and Methods of Research Evaluation.

#### **Selected Reading:**

1. Bush, C.H. and Harter, S.T. Research methods in Librarianship: 1986
2. Krishna Kumar. Research methods in Library and Information Science, 1992.
3. Kothari, C.R. Research Methodology, 1990.
4. Rao, IK. Quantitative methods in Library and Information Science, 1983.
5. Goode and Hatt. Methods of Research, 1968.

### SPT-3.3B: TECHNICAL WRITING

<b>Unit-1</b>	Technical writings basics: Definitions, Purposes, Characteristics, Types, Functions, Target groups and their requirements.
<b>Unit-2</b>	Technical writing Process: Planning, drafting , editing, finishing and producing the document. Use of editorial tools viz Dictionaries, Style Manuals.
<b>Unit-3</b>	Technical Writing Style: Language and technical skills, styles, Semantics, Syntax, Diction, Sentence Structure, Readability.
<b>Unit-4</b>	Technical Writing Techniques: Information searching and gathering skills, Summarizing Designing pages: Tables, Line Graphs, Bargraphs, Pie charts, Charts and Illustrations, footnotes and end notes.
<b>Unit-5</b>	Technical Communications: Structure and format of journal articles, seminars/conference papers, review articles, technical reports, research proposals, monographs, dissertations/theses. Use of PageMaker and MS-Office for the preparation, production and presentation.
<b>Unit-6</b>	Technical presentations and evaluation: Preparation and use of multimedia facilities for presentation. Criteria for evaluation of scientific and technical communications and presentations. Marketing Communication: company white papers, reference manuals, user manual, on-line help files, data sheets, newsletters. Implications on LIS – Growth opportunities, diversity of field, marketing, quality coordination.

#### Selected Readings:

1. Anderson, Paul V and Brockamn, R John and Miller, Carolyn (ed). New essays in Technical and scientific communication: Research, theory and Pracice. Farmingdale: NY, Baywood, 1997
2. Day, Robert A. Writing scientific papers in English Ed 2. Philadelphia: ISI, 1989
3. Joshi, Yateendra. Communicating in style. New Delhi: TERI, 2003
4. Riodarn, Daniel G and Pauley, Steven E. Technical report writing today. Ed 8. New Deli: Biztantra, 2004
5. Society for Technical Communication. Code for communicators. Washington D C. STC, 1998
6. Staples, Catherine and Ornatowski, Cezar (Ed). Foundations for teaching technical Communications:
7. Theory, Practice and Program Design. Greenwich, CT: Ablex, 1997
8. Xerox Publishing standards: A manual of style and design. New York: Xerox press, 1988

### OEPT – 3.4: INTERNET AND SEARCH ENGINES

<b>Unit 1</b>	Internet: Origin, History and Evolution. Internet based library and information services. Web browsers-Internet explorer, Google chrome, Firefox. .Search engines and metasearch engines: Search strategies
<b>Unit 2</b>	Search Engines and Crawlers: need, objectives, types; Web: structural and evolutionary characteristics,
<b>Unit 3</b>	Evolution of web: Web 1.0, 2.0, and 3.0; Measuring the quality of a search engine, Precision/recall Internet and Search engine Retrieval; Search tools and techniques
<b>Unit 4</b>	Electronic communication: TCP/IP. E-mail. E-commerce. Cybercrimes and Laws: Regulation of Cyber Laws, IT Bill 2001 (Govt. of India) and its Amendments. Internet Security (Firewalls, Hacking etc.)
<b>Unit 5</b>	Social networks: Wikis, Linkedin, Facebook, Google+, Twitter
<b>Unit 6</b>	Web Designing Tools- Mark-up Languages (HTML) Evaluation of Web Sites and Web Resources -

#### Selected Reading:

1. Soumen Charkabarti, Mining the Web: Discovering Knowledge from Hypertext Data, Morgan Kaufmann, 2002. Chaps. 1, 2.
2. The Anatomy of a Large Scale Hypertextual Web Search Engine Sergey Brin and Lawrence Page, Seventh International World Wide Web Conference, 1998.
3. Searching the Web Arvind Arasu et al., ACM Transactions on Internet Technology, 2001.
4. Mercator: A Scalable, Extensible Web Crawler by Allan Heydon and Marc Najork, World Wide Web 2:4 pp. 219-229, 1999.
5. Richardo Baeza-Yates and Berthier Ribierno-Neto, Modern Information Retrieval Addison Wesley, 1999. Chap 2.
6. Alfred and Emily Glossbrenner, Search Engines for the World Wide Web, 3rd edition Peachpit Press 2001.
7. Squeal: A Structured Query language for the Web Ellen Spertus and Lynn Andrea Stein. Computer Networks 33:1-6, pp. 95-103, 2000.
8. The Deep Web: Surfacing Hidden Value by Michael K. Bergman, Journal of Electronic Publishing.

### **CPP-3.5: INFORMATION PROCESSING AND RETRIEVAL**

Classification of Documents according to UDC (depending on the availability).

(Each student shall compulsorily maintain practical record and submit the same at the time of practical examination).

### **SPP-3.6: DIGITAL LIBRARIES**

Hands-on experience in any one digital library software (depending on the availability)

(Each student shall compulsorily maintain practical record and submit the same at the time of practical examination).

### **SPP- 3.7A: RESEARCH METHODOLOGY**

Acquaintance and hand on experience with SPSS.

(Each student shall compulsorily maintain practical record and submit the same at the time of practical examination)

### **SPP- 3.7B: TECHNICAL WRITING**

Work assignment on technical writing basics; technical writing process, techniques and Styles. Acquaintance, hands-on experience and work assignment with software packages.

(Each student shall compulsorily maintain practical record and submit the same at the time of practical examination)

### **OEPP-3.8: INTERNET AND SEARCH ENGINES**

Acquaintance, hands-on experience and work assignment using Internet sources and services, search engines and their search strategies.

(Each student shall compulsorily maintain practical record and submit the same at the time of practical examination)

### **CPT-4.1: INFORMATION AND COMMUNICATION TECHNOLOGY**

<b>Unit- 1</b>	Telecommunication: Signals - analog/digital. Transmission media - Pair of wires, Coaxial, Optic fibers. Satellite communication; V-SAT, Microwave, Modulation and Demodulation,
<b>Unit-2</b>	Networks: Concept, Definition, Need, Uses, Network Topologies, Types of Networks -LAN, MAN and WAN. Network Architectures; Network protocols, Network Protection and Security
<b>Unit-3</b>	Communication Networks: NICNET, I-NET, BSNL, and ERNET. Library Networks in India: INFLIBNET, DELNET and CALIBNET
<b>Unit-4</b>	Internet: Origin, History and Evolution. Internet based library and information services. Web browsers-Internet explorer, Google chrome, Firefox. Search engines and metasearch engines: Search strategies
<b>Unit-5</b>	Electronic communication: TCP/IP. E-mail. E-commerce. Cybercrimes and Laws: Regulation of Cyber Laws, IT Bill 2001 (Govt. of India) and its Amendments. Internet Security (Firewalls, Hacking etc.)
<b>Unit-6</b>	Web Designing Tools- Mark-up Languages (HTML, DHTML, XML, Java) Evaluation of Web Sites and Web Resources -

#### **Selected Readings:**

1. Andrew S. T. & David J.W. (2011). Computer networks. Boston: Pearson Prentice Hall.
2. Balakrishnan, S. (2000). Networking and the future of Libraries. New Delhi: ESS ESS.
3. Bose, K.(1994). Information networks in India: Problems and prospects. New Delhi: ESS ESS.
4. Jeanne, F.M. (2006). A librarian's guide to the Internet: A guide to searching and evaluating Information. Oxford: Chandos publishing.

5. Kumar, P.S.G. (2004). Information technology: Applications (Theory and Practice). Delhi: B.R. Publishing.
6. Lucy, A. T.(2005). An introduction to computer based Library system. 3rd Ed. Chichester: Wiley.
7. Zorkoczy, P. (2005). Information technology: An introduction, London: Pitman
8. Bell, A. (2009). Exploring Web 2.0: second generation internet tools - blogs, podcasts, wikis, networking, virtual worlds, and more. Georgetown, TX: Katy Crossing Press.
9. Campesato, O., & Nilson, K. (2011). Web 2.0 fundamentals with Ajax, development tools, and mobile platforms. Sudbury, Mass.: Jones and Bartlett Publishers.
10. Governor, J., Nickull, D., & Hinchcliffe, D. (2009). Web 2.0 architectures. Sebastopol, CA: O'Reilly Media, Inc.
11. Shah, S. (2008). Web 2.0 security: defending Ajax, RIA, and SOA. Boston: Charles River Media.
12. Shelly, G. B., & Frydenberg, M. (2011). Web 2.0: concepts and applications. Boston, MA: Course Technology.
13. Solomon, G., & Schrum, L. (2010). Web 2.0 how-to for educators. Eugene, O.R. : International Society for Technology in Education.

## CPT-4.2: INFORMATION PRODUCTS AND SERVICES

<b>Unit 1</b>	Information as a resource, Economic value of information, Information Products. Marketing: Basic Concepts and global scenario.
<b>Unit 2</b>	Meaning of information and information services: definition and purpose. Economic modules and their application for information industry
<b>Unit 3</b>	Transborder data flow. Actors and participants. Barriers: access, economic, legal, linguistic and cultural. Application of economic models in information industry
<b>Unit 4</b>	Products and Services: Planning and development. Marketing Mix, New Product Development Cycle, Product and service promotion - advertising, packing, branding etc. Concept of TQM. Content development and Management.
<b>Unit 5</b>	Pricing of information products and services: objective and importance, factors influencing pricing, pricing techniques. Market Research Techniques and tools. Statistical tools forecasting models.
<b>Unit 6</b>	Strategic marketing-strategies for marketing of information products and services in different libraries. Information marketing and new technologies..

### Selected Readings:

1. Bookstein, A. (1981). An Economic Model of Library Service. *Library Quarterly*, 51(4), 410-428.
2. Bryson, J. (1996). *Effective Library and Information Center Management*. New Delhi: Jaico.
3. Gupta, D. K., Koontz, C., Massisimo, A., & Savard, R. (Eds.). (2006). *Marketing Library and Information Services: International Perspectives*. Munich: K G Saur Verlag GmbH.
4. Jain, A. K., Jambhekar, A., Rao, T. P., & Rao, S. S. (Eds.). (1999). *Marketing information products and services: a primer for librarians and information professionals*. New Delhi: Tata McGraw-Hill Publishing Co Ltd.
5. Kotler, P., & Keller, K. L. (2012). *Marketing Management (14th ed.)*. Delhi: Prentice Hall.

6. Rab, S. F. (1994). *The Changing frontiers of library and information science: concepts, models & applications*. New Delhi: Commonwealth Publishers.
7. Rowley, J. (2012). *Information Marketing (2nd ed.)*. Burlington: Ashgate Publishing Ltd.
8. Saez, E. E. (2012). *Marketing Concepts for Libraries and Information Services (2nd ed.)*. London: Facet Publishing.
9. Savard, R. (Ed.). (2002). *Education and Research for Marketing and Quality Management in Libraries*. Munich: K G Saur Verlag GmbH. IFLA Publications: 99
10. Seetharama, S. (1998). *Libraries and Information Centres as Profit Making Institutions*. New Delhi: Ess Ess Publications.
11. Weingand, D. E. (1999). *Marketing Planning Library and Information Services (2nd ed.)*. Englewood: Libraries Unlimited.

### **SPT-4.3A: WEBOMETRICS, INFORMETRICS AND SCIENTOMETRICS**

<b>Unit-1</b>	Concept of Scientometrics: Meaning, Definitions, Scope, Need and Purpose, Librametrics to Cybermetrics.
<b>Unit-2</b>	Sources of Data: Science Citation Index Expanded, Social Science Citation Index, NASA:ADS, PopLine, Arts and Humanities Citation Index, LISA.
<b>Unit-3</b>	Bibliometric Laws: Bradford's Law; Zipf's Law and Lotka's Law.
<b>Unit-4</b>	Growth of Literature Study: Growth of literature, Growth Models- Logistic, Power. Obsolescence
<b>Unit-5</b>	Scientific Productivity: Citation Analysis; Authorship Study; Collabration; Techniques of authorship studies.
<b>Unit-6</b>	Webometrics: Meaning and Definitions; Basic framework of Webometrics,; Instruments for Webometrics analysis and Recent trends.

#### **Selected Readings:**

1. Garfield, E: Essays of an Information Scientist: 1999-1993. 15 volumes, USA, ISI Press, 1993.
2. Ravichandra Rao, I.K.: Quantitative Methods for Library and Information Science. New Delhi, Wiley, 1983.
3. Wolfram, Dietmar: Applied Informetrics for Information Retrieval Research. London, Raintree, 2003.
4. Mahapatra, Gayatri: Bibliometric Studies. New Delhi: Indiana, 2009.
5. Tiwari, A: Bibliometrics, Informetrics and Scientometrics, Jaipur, RBSA, 2006.
6. Devarajan, G.: bibliometrics Studies in the Internet Era. New Delhi, Ess Ess, 1997.
7. Sangam, S.L. et al. : Webometrics, Informetrics and Scientometrics. Dharwad: KUD, 2010.
8. Pritchard, Alan: Bibliometrics. Wettford, AAHBOOKS, 1960.
9. Senguputa, I.N.: Bibliometric Research. Kolkotta, SBA, 1988.

### SPT-4.3B: E-PUBLISHING AND WEB TECHNOLOGY

<b>Unit-1</b>	Electronic Publishing and scholarly communication: Trends, Challenges and Opportunities to Libraries, E-journals and e-books. Platforms, Standards and formats. DTP software. Economics of e-publishing. IPR and copyright issues.
<b>Unit-2</b>	Plagiarism: Social, legal issues and usability issues. Anti-plagiarism Software, online plagiarism checkers
<b>Unit-3</b>	Web 2.0. Definition and Characteristic features. Web 2.0 challenges for Libraries. Web 2.0 based Library services.
<b>Unit-4</b>	RSS feeds. Metadata. Tags. Folksonomy, Blogs, Photosharing, Social book marking, Social networks. Cloud computing
<b>Unit-5</b>	Understanding Podcasting, VODcast and Screencast. WIKIS, Mashups, Real time communications.
<b>Unit-6</b>	Web mining: Content, structure and usage mining, Text mining, Image and multimedia mining. Data Harvesting and Semantic Web, Harvesting Web Resources

#### Selected Readings:

1. Gary Shelly, Mark Frydenberg (2010): Web 2.0: Concepts and Applications
2. Dermot A. McCormack (2002). Web 2.0. Aspatore Books,
3. Jane Hosie-Bounar, Barbara M. Waxer (2010). Web 2.0: Making the Web Work for You
4. By David J. Brown, Richard (2008). The Impact of Electronic Publishing: The Future for Publishers and Librarians
5. Tatiana-Helen. Synodinou, Sarantos Kapidakis, Ioannis Iglezakis (2011). E-publishing and Digital Libraries: Legal and Organizational Issues
6. Peter K. Ryan (2011). Social Networking The Rosen Publishing Group,

#### **CPD-4.4.: DISSERTATION**

Student shall have to choose a topic for dissertation and preliminary preparation to be carried out under a guidance of a teacher. The student shall have to submit the dissertation on the chosen topic before the commencement of IV semester theory examinations.

#### **CPP-4.5: INFORMATION COMMUNICATION TECHNOLOGY**

Acquaintance with Search Engines Search Strategies, Creation of custom Search Engine. Designing and launching of websites, use of HTML, Bluevoda.

#### **CPP-4.6: INFORMATION PRODUCTS AND SERVICES**

Acquaintance, hands-on experience and work assignment with Building Newsletter; Building/ packaging information as a product; Building a digitized collection of e-books and e-journals; Content Development service.

(Each student shall compulsorily maintain practical record and submit the same at the time of practical examination)

#### **SPP-4.7A: WEBOMETRICS, INFORMETRICS AND SCIENTOMETRICS**

Application of mathematical and statistical techniques to measure: Collaborative Co-efficient; Degree of collaboration; Collaborative Index; h-Index; growth of literature; obsolescence of literature; impact factor of journals and institutions; scientometric portraits of individual scientists.

(Each student shall compulsorily maintain practical record and submit the same at the time of practical examination)

#### **SPP-4.7B: E-PUBLISHING AND WEB TECHNOLOGY**

Acquaintance with the Social networking, Plagiarism software and web mining.

(Each student shall compulsory maintain practical record and submit the same at the time of practical examination).

#### **CPPP-4.8: PROJECT PRACTICAL**

Student shall have to present the findings of the chosen topic before the examiner after the IV semester theory examinations.