

BLISc (CBS) / MLISc- I (CBCS)
SEMESTER- I

1T1

FOUNDATIONS OF LIBRARY AND INFORMATION SCIENCE

Unit I :

- Library as a Social Institution
- History of Libraries-Origin, Development with special reference to India
- Types of Libraries: Academic Libraries: School, College and University Libraries
- Public Libraries, National Library, Calcutta: Concept, Functions and Services
- Special Libraries and Information Centers: State Central Libraries in Maharashtra
- Recent Trends in Library and Information activities in India

Unit – II :

- Normative Principles of Library Science
- Five Laws of Library Science by S. R. Ranganathan and its implication to Library and Information Science
- Postulates and Canons
- Public Relation and Publicity
- Extension Activities and Outreach Services
- Promotional and Consultancy Services

Unit-III :

- Library Legislation in India
- Salient Features of Maharashtra Public Library Act 1967
- Press and Registration Act and Delivery of Books and News Papers (Public Libraries) Act and Copy Right Act
- Role of Union and State Governments (Committees & Commissions on Libraries, UGC, RRRLF etc.)
- National Information Policy, India

Unit-IV

- Library Movement with Special Reference of India
- Librarianship as a Profession
- Attributes, Ethics of a Profession
- Philosophy of Librarianship
- Professional Associations: National (ILA, IATLIS) and International (IFLA, ALA, LA)

Recommended Books for Study

1. Chakraaborty, N.C. Library Movement in India. Delhi, Hindustan.1962.
2. Khanna, J. K. Library and Society. Kurukshetra Research Publication. 1987.
3. Krishna Kumar. Public Library Stem in India. Indian Book Industry 21st 1992.
4. Kumar PSG. Indian Library Chronology,Ed.2. Bombay, Allied Publishers. 2000.
5. Kumar, PSG. Fundamentals of Information Science. Delhi, S. Chand. 1997.
6. Mittal, R.L. Library Administration. Delhi, Metropolita. 1964
7. Nalhe, Umaji. Working and Finance of Aided Public Libraries. ISBN-978-93-82664-38-3;Satyam Publishers & Distributors, Jaipur. (Rajasthan). 2015.
8. Ranganathan S. R.New Education and School Library. Ed.2. Delhi, Vikas.1973.
9. Ranganathan, S.R. Five Laws of Library Science. Madras LibraryAssociation. 1957.
10. Sharma, O.P. History of the Development of University Libraries in India: an appraisal. Indian Librarian. Dec.1964.
11. Sharma, Pandey S. K. Library and Society. Ed. 2 ND. Ess Ess . 1992
12. Subramoni (TS) Public Relations in Libraries (IASLIC Bulletin v31;1986.
13. The National Library (Calcutta). Brochure,1992.
14. Vashisth, C.P. University Libraries in India: a review. Library Herald V 19: 1980.
15. Vyas, S.D. Library and Society. Jaipur. Panchasheel. 1993.

SEMESTER-I

1T2

KNOWLEDGE ORGANISATION

Unit I: Universe of Knowledge and Library Classification

- Knowledge: Concept, Definition, Types
- Universe of Subject: Structure, Attributes and Mode of Formation
- Library Classification: Concept, Definition, Need and Purpose
- Knowledge Classification Vs Book Classification

Unit II: Classification: Foundation And Trends

- Basic Concepts and Terminology
- Canons for three Planes: Idea, Verbal, Notation.
- Schemes of Classification: CC, DDC, UDC, LC.
- Modern Trends in Classification: CRG, BSO, Web Dewey

Unit III: Cataloguing Foundation

- Cataloguing: Concept, Need, Purpose

- Cataloguing Code & Standard: AACR-II
- Canons of Cataloguing
- Types of Entries: Main, Added, Reference, Cross Reference
- Parts of Book

Unit IV: Cataloguing Trends

- Cataloguing of Non Book Material: Traditional & Electronic
- Selected rules in DC & CC
- OPAC, Web OPAC, CCF
- Subject Heading Lists: LC, Sear's

Recommended Books for Study

1. American Library Association Anglo American Cataloguing Rules 1967, North American Text, Chicago:A.L.A., 1967.
2. Bavakutty, M.Conons of Library Classification, Trivandrum: Kerala Library Associations, 1981.
3. Campbell, M. Cataloguing of Non Book Material, U.S.A: University Microfilms, 1965.
4. Chakraborty, A.K. Bibliography: theory and practice, Calcutta; World Press, 1987.
5. Coates, E.J. Subject Catalogue Heading and Structure, London: Library Association, 1961.
6. Dhyani, P. Library Classification, Theory and Principles New Delhi: Vishva Prakashan, 1998.
7. Girija Kumar and Krishan Kumar. Bibliography, New Delhi: Vikas Publications, 1990.
8. Girija Kumar and Krishan Kumar. Cataloguing, New Delhi: Vikas Publications, 1986.
9. Hingve, K.S. Granthalaya Vergikaran, Pune: Suvichar Prakashan, 1974.
10. Horner, J. Cataloguing, London: Association of Assistant Librarian, 1970.
11. Husain, S. Library Classification: Facets and Analysis, New Delhi: Tat McGraw Hill, 1993.
12. Khanna, J.K.Handbook of Library Classification System, New Delhi: Beacon Books, 1997.
13. Krishan Kumar, Theory of Classification, 5th ed. New Delhi: Vikas Publication, 1996.
14. Kumar P.S.G. and Mohammad , Riaz. Cataloguing, New Delhi: Vikas Publications,m 1986.
15. Kumar, P.S.G. Knowledge Organisation, Information Processing and Retrieval. New Delhi. B.R.Publishing House, 2003.
16. Kumar, P.S.G. Practical Guide to DDC 20. Nagpur, Dattasons, 1990.
17. Kumar, P.S.G., Knowledge organization, information processing and Retrieval: Practical paper 3 of UGC Model curriculum. B.R. Publication, New Delhi, 2003.
18. Lihitkar, Shalini, R. and Veranjanallu. Cataloguing: Theory and Practice. B.S. Publication, 2012.Hyderabad.
19. Mahajan, S.G.Granthalayan Talikikaran Prathyakshika. Vol. 1, Pune: Maharashtra Vidyapith Granth Nivedhi Mandal, 1974.
20. Marcella, R.A. New Manual of Classification, Delhi: Jaico Publications, 1997.
21. Pande, S.K.Sharma. POusthakalaya Siddantha. Delhi: Satisahitya Prakashan.

22. Rajyalakshmi, D. Impact of Ranganathan on AACR. Datison Publication, 2004. New Delhi.
23. Ranganathan, S.R. Classification and Communication, Bangalore: Sarada Ranganathan Endowment for Library Science, 1989.
24. Ranganathan, S.R. Classified Catalogue Code, 5th ed. Bombay: Asia Publication House, 1964.
25. Sajita, M.P. Manual of Practical Colon Classification, New Delhi: Sterling Publishers, 1984.
26. Satija, M.P. DDC-20th Edi: Practice.
27. Satija, M.P. Theory and Practice of Subject Headings: The Sears List. Today and Tomorrow's Printers and Publishers, New Delhi, 2011.
28. Satija, M.P. and Goswami, J.P. Exercises in the 21st edition of DDC, New Delhi: Sterling Pub.Pvt. Ltd, 1998.
29. Sengupta, B.K. Cataloguing: Its Theory and Practice, 3rd ed., Calcutta: Work Press, 1974.
30. Shera, J.H. Classified Catalogue Basic Principles of Practice, Chicago: A.L.A., 1956.
31. Tripathi, S.M. and Showkeen, N.S. Prasuchirkaran Siddantatha Multalva. Agra: .K.Publishers, 1997.
32. Tripathi, S.M. Modern Cataloguing theory and practice, Agra: Shivalal Agrawal, 1969.
33. Vishwanathan, C.G. Cataloguing: Theory and Practice, 6th ed., New Delhi: Today and Tomorrow, 1970.

SEMESTER-I

1T3

INFORMATION SOURCES AND SERVICES

Unit-I: Information Sources

- Need for Information Sources in Library.
- Sources of Information: Documentary and Non Documentary Information Sources/ Electronic Information Sources.
- Nature, Characteristics of Printed and Electronic Reference books and Criteria for Evaluation of Printed and Electronic Reference Books.

Unit-II: Reference Services, User Studies and User Education

- Definition, Need, Nature and scope of Reference Service (Manual and Electronic).
- Types of Reference Service: Ready and long Range Reference Services, Anticipatory, Responsive Service and Electronic Reference Service.
- Steps in Reference Services, Reference Services in Public, Academic and Special Libraries

- Organisation of Reference Department.
- Types of Users, User studies: Purpose and Techniques.
- User education: Objective and Techniques.

Unit-III: Information Services

- Information Services: Definition, Concept, Need and Current Trends.
- Types of Abstracts: International and National Abstracting Services.
- Index: Meaning, Types and its use, International and National Indexing services.
- Alerting (CAS and SDI), Bibliographical, Referral, Electronic Document delivery Service and Translation Services.
- Internet as a source of information in Library Services.

Unit-IV: Trends in Reference and information Services & Information Centers/ System

- Impact of IT on Reference and Information Services: Databases, E-books and Journals.
- Digital and Virtual Reference Service.
- National Information Centres and systems (NISCAIR, NASSDOC, DESIDOC, NCSI).
- International Information systems (INIS, AGRIS, DEVSIS, MEDLARS).

Recommended Books for Study

1. Bhat, S.G, Pralekhan Parichaya, Nagpur: Maharashtra Rajya Granth Mirmitti Manda, 1977.
2. Bose, H.C. Information Science, Principles and Practices, 2nd ed. Delhi: Sterling, 1993.
3. Chaturvedi, D. Sandarbha Seva Ke Vividha Ayam, Mumbai: Himalaya Publishing house, 1993.
4. Foskett, D.J. Information Service in Libraries, New Delhi: Anmol Publications, 1994
5. Guha, B. Documentation and Information, 2nd ed. Calcutta: World Press, 1983.
6. Katz W.A. Introduction to Reference work. Vol. I and II, 6th Ed. New Delhi: Vikas Pub. House, 1992.
7. Krishna Kumar Reference Service, 5th edition, New Delhi: Vikas Pub. House, 1996.
8. Kumar, P.S.G. Information Sources & Services: Theory & Practice. New Delhi, B.R. Publishers, 2004.
9. Mukherjee, A.K. Reference work and its tool, 3rd ed. Calcutta: World Press, 1975.
10. Ranganathan, S.R. Documentaation, Genesis and Development. New Delhi: Vikas Pub. House, 1975.

11. Ranganathan, S.R. Reference Services, 2nd ed. Bangalore: Sarda Rangnathan Endowment for Library Science, 1961 [Reprint (1990)].
12. Sewa Singh. Manual of Reference Service and Sources, New Delhi: B.R. Publishing Corporation, 2004.
13. Sharma, J.S. and Grover, D.R. Reference Service and Sources of information, New Delhi: Ess Ess Publications, 1987.
14. Sharma, S.K. Reference Service, New Delhi: Shree Publications, 2008.
15. Sood, S.P. (ed.) Pralekhan Evam Suchana Vigyan, Jaipur: Raj Publishing House, 1994.
16. Tripathi, S.M. Sandarbha Avam Suchana Seva Ke Navin Ayam (New Dimension of Reference/information services), Agra: Y.K. Publishers, 1993.
17. Varma, S.R. Reference and Information Service, New Delhi: Shree Publications, 2006.
18. Walfard, A.J. (ed.) Concise Guide to Reference Material, London: Library Association, 1981.
19. Kale, K.B. Sandarbha Seva Ani Mahiti Sadhananche Mulyankan (Reference and Evaluation of Information Sources), Nagpur: Vishva Publishers and Distributors, 2010.
20. Kale, K.B. Mahiti Seva Va Sadhane (Information Services and Sources), Nagpur: Vishva Publishers and Distributors, 2010.
21. Bhat, S.G. Electronic Mohiti Sadhane, Nagpur : Pimpalpure Book Dustributor, 2008.

List of Reference Sources for Evaluation

Dictionaries (शब्दकोश)

1. Webster's Third New International dictionary of English Language
2. Oxford English Dictionary
3. The Twenty Century English-Marathi Dictionary
4. Chambers English-Hindi Dictionary
5. मोल्सवर्थ यांचा English-Marathi शब्दकोश
6. The Librarians Glossary of Terms Used in Librarianship, Documentation
7. भारतीय व्यवहार कोश

Encyclopedias (ज्ञानकोश / विश्वकोश)

1. The New Encyclopaedia Britannica
2. Encyclopaedia Americanna

3. मराठी विश्वकोश
4. McGraw-Hill Encyclopaedia of Science & Technology
5. International Encyclopaedia of the Social Sciences
6. Encyclopaedia of Library and Information Science

Yearbooks & Almanacs (वार्षिके आणि पंचांग)

1. India 2014 : A Reference Annual
2. Manorama Yearbook.
3. The Statesman's Yearbook.
4. The Europa World Yearbook.
5. World Alamanac and Book of Facts

Biographical Sources (जीवन चरित्रात्मक साधने)

1. India who's who
2. The International who's who
3. Who's who of Indian Writers:1999
4. Dictionary of National Biography (by S.P. Sen)

Geographical Sources (भौगोलिक साधने)

1. Britannica World Atlas
2. महाराष्ट्र राज्य गॅझेटिअर: नागपूर जिल्हा
3. महाराष्ट्र पर्यटन कोश
4. India Handbook (Broadnauk, Robert)
5. Gazetteer of India: Indian Union

Directories (निर्देशिका / मार्गदर्शिका)

1. Directories of Libraries in India
2. World of learning.
3. Commonwealth Universities Yearbook: A Directory
4. University Handbook: AIU Publication (INDIA)

Handbook and Manuals (निर्देशग्रंथ व हस्तपुस्तके)

1. Guinness Book of World Record.
2. Limca Book of Record.

Bibliographies (ग्रंथसूची)

1. Indian National Bibliography
2. British National Bibliography
3. Indian Books in Print
4. Books in Print (R.R. Bowker)
5. National Union Catalogue of Scientific Serials (NUCSSI)
6. Ulrich's International Periodicals Directory

Indexing Sources (निर्देशन साधने)

1. Guide to Indian Periodical Literature: Social Sciences and Humanities
2. Index India
3. Current Technology Index

Abstracting Sources (सार साधने)

1. Indian Library Science Abstracts
2. Indian Science Abstracts
3. Chemical Abstracts
4. Biological Abstracts
5. Library and Information Science Abstracts (LISA)
6. Sociological Abstracts

SEMISTER –I

PRACTICE

1P1 Classification Practice (Part I)

Marks – 100

- Classification of Subject using DDC (Latest Edition)
- Basic Subject and Compound Subject
- Tables : 1, 2 and 3
- "Add" Instruction

1P2 Cataloguing Practice (Part I)

Marks – 100

- Cataloguing of Documents using AACR (Latest Edition)
- Simple, Joint Author, Corporate Author, Composite Books, Pseudonymous
- Structure of Main entries, Added entries, Reference entries

1P3 Information Technology Basics (Part-I)

Marks – 100

- MS-Office
- Creation of Purchase Order, Bio-data in Word file
- Creation of presentation in MS-Power Point
- Creation of Marksheet, Salary Slips, Accession Register in MS-Excel
- Creation of Charts
- Internet Searching

1P4 Information Sources (Part – I)

Marks – 100

- Study of various Reference Sources with special reference to India: Dictionaries, Encyclopaedias, Year Books and Directories
- Evaluation of selected standard Reference Sources
- Finding information from above standard reference sources
- List of the sources enclosed

**BLISc (CBS) / MLISc- I (CBCS)
SEMESTER- II**

2T1

MANAGEMENT OF LIBRARY AND INFORMATION CENTRES

Unit I: Management of LICs

- Meaning and definitions, Role/functions and principles of management, schools of thoughts in management, levels of management
- Planning: Characteristics Need, Forecasting, Types and Steps
- Organisational structure, Authority and Delegation

Unit II: Library Housekeeping Operations

- Sections of Library and Information Centers, Book Ordering, Acquisition and Technical Processing, Serial Control, Circulation Control, Maintenance, Stock Verification,
- Online Books Shops, Weeding, Conservation and Preservation of Library Resources
- Library Committee, Library Statistics, Library Reports, Library Rules and Regulations
- Building and Space Management in LICs

Unit III: HRM and Financial Management

- Recruitment and Selection, Training and Development, Leadership Styles, Motivation.

- Financial Management: Budgeting Techniques Traditional- PPBS and ZBB
- Sources of Finance and Resource Mobilisation
- Budget and Control – Cost effectiveness and Cost benefit Analysis.

UNIT IV: Trends in Management Techniques

- Trends in Management Techniques-MBO, TQM, SWOT, MIS, Management of Change, Outsourcing.

Recommended Books for Study

1. Evans, E. Management Techniques for Libraries, New York, Academic Press Inc. 1984.
2. Faraqui Khalid, F. (ed). Planning Budget in Libraries, New Delhi: Anmol Publications, 1997.
3. Jain, M.K. Library Manual: A Practical Approach to Management, New Delhi: Shipra Publication, 1996.
4. Kale, K.B. Library Security, Nagpur: Dattason's Publication, 2010.
5. Khan, M.A. The Principles and Practice of Library Science, New Delhi: Sarup & Sons, 1996.
6. Khanna, J.K. Fundamentals of Library Organisation, New Delhi: Ess Ess Publication, 1984.
7. Koontz, H and Weitghric, H. Essentials of Management. 5th ed. New Delhi, Tata McGraw Hill Publishing Co.Ltd., 1998.
8. Krishan Kumar. Library Administration.
9. Krishan Kumar. Library Mannual
10. Krishna Murthy, R. Library Administration & Resources, New Delhi: Common Wealth Publishers, 1997.
11. Kumar, PSG. Management of Libraries and Information Centers, B R Publication, Delhi.
12. Lahiri, R. Management of Libraries Concepts and Practices, New Delhi: Ess Ess Pub. 1996.
13. Mittal, R.L. Library Administration: Theory and Practice, New Delhi: Metropolitan, 1996.
14. Mukherjee, S.K. and Sengupta, B. Library Organisation and Library Administration, 2nd ed. Calcutta: The World Press Private Ltd., 1977.
15. Narayanan, G.J. Library Management and Information of Management. New Delhi, Printice Hall of India, 1991.
16. Nikose, S.M. Aadhunik Granthalaya Vyvasthan (M) Pradyna Publication, Nagpur. 2007.
17. Nikose, S.M. Granthalaya Vyvasthan (M). Pradyna Publication, Nagpur. 2007.
18. Pawar, B.S. and Vyas, S.D. Library Management, New Delhi: B.R. Publishing Corporation, 1986.
19. Ranganathan, S.R. Library Administration. Madras: Asia Publishing House, 1959.
20. Sehgal, R.L. Guide to Library and Information Science, New Delhi: Ess Ess Publications, 1999.

**BLISc (CBS) / MLISc- I (CBCS)
SEMESTER- II**

2T2

INFORMATION TECHNOLOGY – BASICS

Unit-I: Information Technology

- Information Technology: Definition, Need, Scope and Objectives
- Applications of IT in Libraries and Information Centres
- Introduction to Computers: Historical Development, Generations, Classification and Components, Architecture, Input devices, Output devices, Main Memory, Secondary storage devices

Unit-II: Computer Software

- Introduction to System Software and Application Software
- Operating Systems: MS-DOS, MS-Windows, XP, Vista, Windows NT, LINUX, UNIX, etc.
- Programming Languages
- Information Processing: Word Processing, Spreadsheets, Power point Presentation, DBMS
- Algorithms and Flow Charting

Unit-III: Fundamentals of Telecommunication

- Fundamentals of Telecommunication – Concepts, Data transmission, Signals, Media, Modes and Devices.
- Computer network: Types, and Topologies.

Unit-IV: Introduction to Internet

- Basics of Internet: History and Development
- Web Browsers, Search Engines, Meta Search Engines
- Search Techniques
- Protocols: TCP/IP, FTP, HTTP, E-mail Protocols

Recommended Books for study

1. Arvind Kumar. Ed.(2006). Information technology for all (2 vols.). New Delhi: Anmol
2. Dhiman, A.K.(2003). Basics of Information technology for librarians and Information scientists, Vol.1. New Delhi: ESS ESS.
3. Bansal, S.K.(2005). Information technology and globalisation, New Delhi: A.P.H. Publishing Corporation

4. Curtin, D.P. & others: Information technology: The breaking wave. New Delhi: TMH, Latest Edition
5. Sinha, P.K.(1992). Computer fundamentals: concept, systems and applications. 2nd ed. NewDelhi: BPB Publications, 1992.

**BLISc (CBS) / MLISc- I (CBCS)
SEMESTER- II**

2T3

RESEARCH METHODS AND STATISTICAL TECHNIQUES

Unit I : Introduction to Research

- Concept, Meaning, Need and purpose of Research, Motivation and objectives of research.
- Types of Research : Basic and Applied Research
- Ethics in Research: Areas of Research in LIS, Role of research in the development of scholarship.

Unit II : Research Methods and Design

- Planning of research- The planning process, review of literature
- Selection of a problem for research-mode of selection, sources of problem, process of identification, criteria of selection.
- Hypothesis- Meaning, types, sources, functions, conceptualization and operationalization
- Designing research proposal
- Literature search-Print, non print and electronic sources
- Research methods- Scientific method, historical method, descriptive, survey and case study method.

Unit III: Research Tools and Statistical Techniques

- Questionnaire, schedule, Interview, Observation,, Library records etc. Primary and secondary data
- Sampling techniques, sample design, sample size, criteria of selecting sample.
- Statistical analysis of data- Mean, Median and Mode, Measures of central tendency.
- Presentation of data-Tabular, Graphic, Bar diagram, Pie chart etc
- Statistical Packages- SPSS, Web based tools etc

Unit IV: Research Report Writing

- Organisation of report, structure, style, contents, Guidelines of research reports.

- Style Manual-Chicago. MCA,, APA, .e-citations etc
- Current Travels in LIS research
- Role of computer in Research.

Recommended Books for Study

1. Gorman, G.E. and Clayton, P. Qualitative Research for Information Professionals: A Practical Hand Book.
1. Goswami, M. Research Methodology in Library Science. New Delhi. Common Wealth Publications, 1995.
2. Kothari, C.R. Research Methodology: Methods and Techniques: New Delhi. Weily Eastern Limited, 1985.
3. Krishan Kumar. Research Methods in Library and Information Science. New Delhi. Har Anand Publications, 1999.
4. Kumar, P.S.G. A Student's Manual of Library and Information Science. New Delhi. B.R.Publishing House, 2002.
5. Nikose, S.M. Granthalaya Aani Mahitishatra Sanshodhan Padhati, Pradnya Publication, Nagpur 2007.
6. Ravichandra Rao I.K. Quantitative Methods for Library and Information Science. New Delhi. Wiley Eastern Limited, 1983.
7. Wilkinson, T.S. and Bhandarkar, P.L. Methodology and Techniques of Social Research. Bombay. Himalaya Publishing House. 1984.

SEMISTER –II

PRACTICE

- | | | |
|------------|--|--------------------|
| 2P1 | Classification Practice (Part-II) | Marks – 100 |
| | <ul style="list-style-type: none"> • Classification of subject using DDC (Latest Edition) • Complex Subject • Tables 4, 5, 6 and 7 • Assigning Book Number (Using at least one standard Book Numbering System) | |
| 2P2 | Cataloguing Practice (Part-II) | Marks – 100 |
| | <ul style="list-style-type: none"> • Cataloguing of Documents using AACR (Latest Edition) • Government Publications, Serial Publications, Collected Work, Series • Non-Book Materials: Audio – Video Disks, Microforms, Maps, Atlases, Globes • Assigning Subject Heading either by standard Subject Heading Lists or by Chain Procedure | |
| 2P3 | Information Technology Basics (Part-II) | Marks – 100 |
| | <ul style="list-style-type: none"> • Database Creation using at least one DBMS Software • Database creation using any Library Automation Software | |

- Searching of Bibliographic database, OPAC
- Creation of Users Database
- Internet Searching

2P4 Information Sources (Part II)

Marks – 100

- Study of various reference sources with special reference to India: Bibliographical sources, Geographical sources, Special Reference Sources, Bibliographical Sources
- Evaluation of selected above standard reference sources
List of sources enclosed in Semester I syllabus

**MLISc- II (CBCS)
SEMESTER- III**

3T1

INFORMATION AND COMMUNICATION

Unit I: Information Science

- Definition, Genesis, Scope and Objectives
- Growth and Development of Library and Information Science
- Information and Knowledge Society: Genesis, Characteristics and Implication
- Interdisciplinary nature of Information Science

Unit II: Communication of Information

- Information: Nature and Characteristics
- Generation of Information
- Value and Use of Information
- Communication Channels, Models and Barriers

Unit III: Economics of Information

- Information as a Commodity
- Economics of Information
- Information Industry- Generators, Providers and Intermediaries
- Global village

Unit IV: Current Trends in Information and Communication

- Databases: Security and Legality
- Copyright Act, Intellectual Property Right Act, Right to Information Act
- National Information Policy, National Knowledge Commission
- Information Superhighway

Recommended Books for Study

1. Hirwade Anil. Patent Information Sources on Internet, Himalaya Publishing House: Mumbai, 2009.
2. Hirwade M.A. and Anil W. Hirwade. Fundamentals of Intellectual Property Rights. Mumbai, Himalaya Publishing House. 2007. P 92.
3. Kumar P.S.G. Fundamentals of Information Science, New Delhi: S.Chand & Co. 1998.
4. Kumar, P.S.G. Information and Communication. Vol.8: Paper 9 of UGC Model Curriculum, B.R.Publication, New Delhi.2004.
5. Lihitkar, Shalini, R. Information Systems and Networks in India. Today Tomorrow, Printer & Publishers, New Delhi, 2012.
6. Lihitkar, Shalini, R. Libraries and Information centres in Maharashtra. Pimplapure Publication Nagpur, 2012.
7. McGarry, K.J. The Changing Context of Information: An Introductory Analysis, London: CliveBingley, 1981.
8. Narayana, G.J. Knowledge and Information Perspective and Prospects. Ess Ess Publication, New Delhi.2010.
9. Nikose, S.M. Resource Sharing Through Networking of University Libraries, Pradnya Prakashan, Chandrapur. 2006.
10. Toffer, Alvin. The Power shift: Knowledge wealth and violence at the Edge of the 21st Century, New York: Bantam House, 1991.
11. Vickery, B.c. & Vickery, A. Information Science in Theory and Practice. London: Butterworth, 1987.

**MLISc- II (CBCS)
SEMESTER- III**

3T2

INFORMATION STORAGE, RETRIEVAL AND BIBLIOGRAPHICAL CONTROL

Unit-I: Information Storage and Retrieval

- Information Storage and Retrieval: Concept, Objectives and Functions
- Document Description: Concept, Standards and Trends
- Information exchange
- Concept, History and Principles of subject Indexing

Unit-II: Indexing models and control devices

- Pre-coordinate Indexing
- Post Co-ordinate Indexing
- Characteristics of Indexing Language
- Vocabulary Control: Concept
- Vocabulary Control Devices: Thesaurus and Subject Heading List

Unit III: Trends in Information Retrieval

- Citation Indexing

- Computer Based Indexing System: KWIC, KWOC etc.
- Search Strategy
- Search Processes: Offline and Online Information Retrieval Techniques
- Evolution of Information Retrieval System
- Research in Information Retrieval System

Unit-IV: Bibliographic Control

- Bibliographical control: Concept and Need
- National Bibliographical Control
- Universal Bibliographical Control
- Role of UNESCO and IFLA for Bibliographical Control

Recommended Books for Study

1. Atchison, J. Gilchrist: Thesaurus Construction, a practical manual, 1972.
2. Austin D., Precis, A Manual of concept analysis and subject indexing: 2nd ed. 1984.
3. Chowdhary G.C. Introduction to Modern Information Retrieval, London. Facet Publishing, 2009.
4. Dhawan, K.S. Principles of Information Retrieval. New Delhi, Commonwealth Publication, 1997.
5. Ellis, D. New Horizons in Information Retrieval, London: Library Association, 1990.
6. Fosket, A.C. Subject Approaches to Information 5th Ed. London: Clive Bingley, 1996.
7. Ghosh, S.B. and Satpathi, J.N. Subject Indexes: Methods and Techniques.
8. Gopinath, M.A. Preparation of an Index to a Book: Case study Lib.Sci with a slant to Documentation, 1967, Paper E.
9. Kesarwani, S.K. Information Access to contributions from LIS festschrifts published from India. New Delhi, Ess Ess Publication, 2011.
10. Kochen, M et.al., Principles of Information Retrieval, 1974.
11. Kumbhar, Rajendra. Thesaurus of Library and Information Science terms. New Delhi, Ess Ess Publication, 2004.
12. Lancaster, F.W. Indexing and abstracting theory and practice. London, facet Publication, 2009.
13. Lancaster, F.W. Information Retrieval System Characteristics, Testing and Evaluation, New York: John Wiley, 1968.
14. Lancaster, F.W. Vocabulary Control for Information Retrieval, New York: Information Resources Press, 1972.
15. Prashar, R.G. Index and indexing system, New Delhi, Medollian Press, 1990.
16. Sengupta, B. and others. Documentation and Information Retrieval, Calcutta, World Press, 1972.

**MLISc- II (CBCS)
SEMESTER III**

3T3

ICT APPLICATIONS IN LIBRARIES AND INFORMATION CENTRES

Unit-I: Planning of Library Automation

- Steps in Planning Library automation: Feasibility Study, system analysis, Design, Implementation and Evaluation
- Selection of Hardware and Software
- Human Resource Development For IT Challenges
- Automation of Housekeeping Operations: Acquisition, Cataloguing, Circulation, Serial Control

Unit-II: Library Management Software

- CDS/ISIS
- LIBSIS
- SOUL
- Open Source Library Management software: Salient features
 - e-Granthalaya
 - Koha

Unit-III: Web Technologies in Libraries and Information Centres

- Library Websites: Contents, Design and Evaluation
- WebOPACs, M-OPACs
- Web 2.0 and Web 3.0: Features and Functions
- Web 2.0 Tools and their applications in Libraries: Weblogs, Podcasts, RSS Feed, Instant Messaging, Wikis, Flickr, Social Networking

Unit-IV: Emerging Technologies in Libraries

- Library Security Technology: RFID, Bar Code, Smart Card, 3M Security, CCTV
- Audio and Video Conferencing: Concept, Tools and Techniques
- E-Learning: Concept, Need, Objectives, Tools
- Multimedia applications in libraries
- Cloud Computing: Concept, Need, Objectives, Tools

Recommended Books for Study

1. Ackermann, F and Hartman, K. The Information specialist's guide to searching and Researching on the Internet and the World Wide Web, Chicago: Fitzroy Dearborn Publishers, 1999.
2. Bhatnagar, S.C and Ramani, K.U. Computers and Information Management: A Printers for practicing Managers, New Delhi: Printice Hall of India, 1989.
3. Bradley, P. and Smith, A. World Wide Web: How to design and construct home pages, London: ASLIB, 1996.
4. Chaudhary, C.G. Text Retrieval System in Information Management, New Delhi: New Age Internation, 1996.

5. Hirwade M.A. Websites of Indian Universities: An Evaluation. Mumbai, Himalaya Publishing House. 2006.p.376. (ISBN 818-4886802 & 978-8184886801)
6. Hirwade, M.A. and Anil W. Hirwade. Information Technology: A Practical Manual. Mumbai, Himalaya Publishing House. 2007. P. 164.
7. Kumar, P.S.G. Computerisation of Indian Libraries, New Delhi: B.R. Publishing, 1987.
8. Kumar, P.S.G. Information Technology Application: Theory & practice. Vol-2: paper 13 &14 of UGC model Curriculum. B.R. Publication. New Delhi, 2004.
9. Leon, A and Leon, M. Fundamentals of Information Technology. Chennai, Leon Tech World 1999.
10. Lihitkar, Shalini, R. Information Systems and Networks in India. Today and Tomorrow's printer and publishers, New Delhi.2012.
11. Ravichandra Rao, I.K. Library Automation, New Delhi: Wiley eastern, 1993.
12. Saffady, W. Introduction to Automation for Librarians, 3rd ed. London: American Library Association, 1996.
13. Taxali, R.K. FOXPRO 2.5 Made Simple for DOS and Windows, New Delhi: BPB Publications, 1996.
14. Thomas,R and Yates, J.A. User's guide to the Unix System, 2nd ed. New Delhi: Tata McGraw Hill, 1995.
15. Wadhawa, R.K. Management Information Systems and Corporate Coomunications, New Delhi: Kanishka Publishers, 1998.

MLISC- II (CBCS)

SEMESTER III

3T4

SOFT SKILLS FOR LIBRARY AND INFORMATION SCIENCE PROFESSIONALS

(SUBJECT CORE)

Unit I Skills for Library and Information Science Professionals

- Professional Skills: Concept, Need, Advantages
- Communication Skills
- Administrative, Managerial, Interpersonal, Human Relation Skills, Soft Skills, Legal Skills, Decision Making Skills, Analytical Skills, Team Building, Time Management Skills, Motivation Skills, Leadership Skills, Negotiation Skills, Problem Solving Skills
- Information Technology Skills, Computer and Network Literacy
- Stress Management, Innovative and Recreational Skills

Unit II Presentation and Interview Skills

- Presentation, Preparing Curricular Vitae

- Online Application, Job Portals for LIS
- Interview Types, Preparation (Job based)
- Panel and Board, Group Discussion, Personal Interview, General Awareness
- Extra-curricular activities
- Personality Development, Positive Attitude, Body Language

Unit III Drafting Letters in LIS context and Writing Skills

- Types of Letter: Formal, Informal
- Drafting Rules, Agenda, Minutes, Recommendations
- Confidential Reports of the Staff
- Report Writing: Progress, Annual Reports, Budget, User Statistics
- Files Records: Management and Maintenance
- RTI Skills and Answering Queries
- Drafting Project Proposals, Writing Research Papers

Unit IV Teaching and Learning Skills

- LIS Education: Aim and Objectives, Problems and Prospects
- Teaching Method: Lecture, Tutorial, Seminar, Symposium, Panel Discussion, Simulation Approach, Role Playing, Case Studies, Practical Work, Training, Oral Test, Written Test, Assignments, Poster Presentation
- E-learning Tools, Courseware, Software, Content Management
- Student Teacher Relations
- Student Performance, Feedback Mechanism, Curriculum Development, Innovative Assessment Method, Use of Teaching Tools

MLISc- II (CBCS) SEMESTER III

3T5

ELECTIVE- I

AGRICULTURAL INFORMATION SYSTEM

Unit I: Agricultural Education and Research

- Growth and development of Agricultural Education in India
- Growth and development of Agricultural Research in India
- Role of Libraries in Agricultural Education, Research and Extension

- Development of Agricultural Libraries in India

Unit II: Information Needs

- Information requirement of Agricultural faculty
- Information requirement of Agricultural Research Workers, Farmers Extension Workers
- Study of Local Agricultural Libraries and Preparation of Report
- User Education

Unit III: Information Resource Development, Organization of Sources

- Collection Development
- Sources of Information:
 - Documentary
 - Non-Documentary
 - Electronic Resources
 - Agricultural Databases
- Internet as a source of information
- Organization and Documentary Sources
- Classification
- Cataloguing
- Indexing
- Storage of document

Unit IV: Management Aspects

- Management of Agricultural Libraries and Information centres
- Planning of Library and Information Centres
- Human Resource Development-Staffing, Training and Development
- Professional Skills
- Financial Management- Budgetary Provisions, Resource Generation

Recommended Books for study

1. Alan Chard, J.R. and Farrel, Lois. Guide to Agricultural and Biological Research. Berkeley:University of California, 1981.
2. Banerjee, S.R. and Moitra, S. Agricultural Documentation Services in India. New Delhi: ICARLibrary (Unpublished).
3. Deshmukh, P.P. Indian Council of Agricultural Research (Delhi). Agricultural UniversityLibraries on Committee, Find Report, New Delhi: ICAR, 1969.
4. Gupta, S.R. Stock Verification in Libraries; Problems and Solutions. Delhi: Ken Pub, 1990.
5. Kumar, P.S.G. Agricultural Librarianship MLISc Elective paper; K umar's curriculum series in Library & information science 12, 2008 x, 380 B.R. Publication, New Delhi.
6. Lihitkar, Shalini.R. Information Systems & Networks in India. Today& Tomorrow's printer &publishers, New Delhi, 2012.

7. Lihitkar, Shalini, R. Libraries and Information centres in Maharashtra. PimplapurePublication.Nagpur, 2012.
8. Lilley, G.P. Information Sources in Agriculture and Food Science. London: Butter Worths, 1981.
9. Maharashtra Government of: Report of the Advisory Committee for Establishment of Agricultural University, Maharashtra, November, 1965, Bombay: Govt. of Maharashtra.
10. Ramtirth, Agris. Information System for Agriculture Science and Technology Inperspective in Library and Information Science. 1, 1982. Pp211-214.
11. Rokde, S.M. Agriculture Education and Libraries in India. Masford Publication. New Delhi,2009.

**MLISc- II (CBCS)
SEMESTER III**

**3T5
ELECTIVE- II
LEGAL INFORMATION SYSTEM**

Unit I: Law Librarianship

- Growth and development of Legal Institutions in India
- Nature, Principles and characteristics of legal information and law libraries
- Types of Law Libraries
- Legal Information Systems: National and International
- Resource sharing and Networks of Legal Information

Unit II: Information Sources

- Special Information Sources: Bills, Acts, Books, Serials, Law Reports, Law Court Notices, Law Case amendments
- Tribunal Report, Law Digests, Legal judgments, delegated legislation
- Rules and Orders, Legal information Sources and Lexicons
- Legal Databases and Digital Libraries

Unit III: Organization and Management of Resources

- Information Processing: Classification, Cataloguing and Indexing
- Developing Special Skills and Techniques to handle legal information
- Managing Finances: Funds and Fund Generation

Unit IV: Information needs and Services

- Special needs of lawyers and legal professionals
- Information Services to Law students, faculty and Research Scholars
- Preparation of a Report on Law Libraries (Local)
- Dissemination methods and techniques
- Advanced Information Services and Products

Recommended Books for Study

1. Anthony, L.J. Handbook of Special Librarianship and Information Work 5th ed. ASLIB, 1982.
2. Banks, M.A. Using a Law Library. 3rd ed. Agricultural in Court out, carsurth, 1980.
3. Dane, J. and Thomas, P.A. How to use Law Library, Sweet and Maxwell, 1979.
4. Kumar, P.S.G., Law Librarianship MLISc Elective Paper Kumar Curriculum series in LISc-15B.R. Publisher, New Delhi, 2008.
5. Lihitkar, Shalini,R. Information Systems and Networks in India, Today's & Tomorrow: Printer & Publisher, New Delhi, 2012.
6. Lihitkar, Shalini, R. Libraries and Information centres in Maharashtra. PimplapurePublication.Nagpur, 2012.
7. Logaw, R.G. Information Sources in Law. Butter Worths, 1986.
8. Miskin, E. Library and Information Services for the legal profession. London: British LibraryResearch & Development Report, 5633, 1981.
9. Moys, E.M. Ed. Manual of Law Librarianship. Ed.2 Wiltshire: Redwood, 1987.
10. Moys, E.N. Ed.Manual of Law Librarianship: the use and organization of legal literature.2nd Ed.Hants, UK: Gower, 1987.

**MLISc- II (CBCS)
SEMESTER III**

**3T5
ELECTIVE- III**

INDUSTRIAL INFORMATION SYSTEM

Unit I: Industries and Industrial Information

- Types of industries
- Industrialization and growth of industries in India
- Categories of Industrial Organizations
- Industrial Information, Nature and Characteristics, Users and Role
- Industrial Libraries and Information Centres: Characteristics and Roles

Unit II: Information Sources, Management of Industrial Libraries and Information Centres

- Information Resource Development
- Information Sources: Internal and External Sources
- Information Sources specific to Industries: Government Document, Technical Report Literature, Trade Literature, Standards, Patents
- Management Aspects

Unit III: Information Service and Products

- Information requirement of various categories and levels of users, function/activities areas in industries
- Reference, Referral and Document Delivery Services
- Technical enquiry service, Alerting Service, Translation Service

- Development of Information Analysis and Consolidation Products: Reviews, State of the Art Report, Trend Report, Technical Digest
- Information Service to Management: Management briefs, Technical notes, Feasibility Study Reports, Mark of Survey Reports, Company Profiles
- Data Services

Unit IV: Impact of IT, Resource Sharing and Networking, Information Systems and Centres

- Impact of IT: Impact on Collection Development, Industrial Databases, Use of Internet and Digital Resources
- Resource Sharing and Networking, Consortia
- National Information Centres: CSIR and its National Laboratories, NISCAIR, SENDOC, Patent Information System, TIFAC
- Role of International Organizations in Industrial Information: UNIDO, UNDP, OECD, ISO etc.

Recommended Books for Study

1. Anthony, L.J. Handbook of Special Librarianship and Information Work 5th ed. London, ASLIB, 1982.
2. Blakewell, K.Y. Industrial Libraries throughout the World. Oxford, Pergamon Press, 1969.
3. Burkett, Jack. Industrial and Related Information Services in United Kingdom 3rd. London: LA. 1972.
4. DRTC Annual Seminar-17 Industrial Information Systems and Services, Bangalore, Documentation Research and Training Centre, 1979.
5. Gopinath, M.A. and Seetarama, S. Industrial Information Systems and Services, DRTC, Annual Seminar (17), 1979, Bangalore: DRTC, 1979.
6. Houghton, Bernhard, Technical Information services. 2nd ed. London, Clive Bingley, 1972.
7. Jackson, E.B. and Jackson, R.L. Industrial Information Systems: A Manual for Higher Management and their information officers/ Librarian Associates. F. Stroudsburg. Dowden G. Huchenson Association and Ross, 1978.
8. Kumar, P.S.G. Business/Industrial Librarianship, New Delhi, B.R. Publishing Corporation, 2008.
9. Library Association Industrial group: Industrial and commercial Library , An Introductory guide. London, Library Association, 1986.
10. Lihitkar, Shalini, R. Libraries and Information centres in Maharashtra. Pimplapure Publication. Nagpur, 2012.
11. Neelameghan, A: Information for small enterprises. Bangalore, Sarda Ranganathan Endowment for Library Science, 1994.
12. Sasikala, C. Industrial Library System, New Delhi, Reliance Publishing House, 1994.
13. Seetharama. S: Planning of Library and Information Centres, Calcutta, IASLIC, 1990.
14. Seetharama. S: Dynamics of Planning and Marketing of Modern Libraries and Information Centres in an Information Technology based environment, Calcutta, IASLIC, 2015.
15. Thakur, D.S. Scientific and Technical Libraries. New Delhi, EssEss Publication, 2006.

PRACTICE

3P1	Information Technology Applications (Part I)	Marks – 100
	<ul style="list-style-type: none">• Information Searching from CD-ROM Databases and Retrieval: LISA – Novice, Advanced and Expert Search• Automated Circulation Systems• Creation of E-mail ID, Sending and receiving mails, File attachments• Internet Searching from websites – Library Networks, Library Consortia, Library Associations, Vidyanidhi, NDLTD, LIS Gateways, Infolibrarian, Information Systems, Digital Libraries, Open Source Software, Plagiarism detecting software, etc.	
3P2	Survey of Libraries and Information Centres (Educational Tour Report)	Marks – 50
3P3	Internship	Marks – 50
3P4	Project Seminar	Marks- 50

MLISc- II (CBCS)
SEMESTER- IV

4T1

SYSTEM ANALYSIS AND BIBLIOMETRICS

Unit I: System Study

- Concepts, Types of System
- Library as a System
- Computerized Information System
- Automated sub-system of a library
- Planning and Development of Computerized Information System
- Database Management System (DBMS)
- Management Information System (MIS)

Unit II: System Analysis, System Design and Development

- System Analysis
- Role of System Analyst
- Professional skills for System Analyst
- System Development Life Cycle (SDLC)
- Structured System Development
- Methodology for System Development
- Flowcharts

Unit III: Bibliometric Studies

- Definitions, Concepts, Growth and Development of Bibliometrics
- Application of Bibliometrics
- Bibliometric Laws: Bradford's Law, Zipf's Law, Lotka's Law
- Citation Analysis
- Bibliographic Coupling
- Obsolescence of Literature
- Ethics of Citations

Unit V: Futuristic Approaches

- Trends in Bibliometrics
 - Scientometrics
 - Informetrics
 - Cybermetrics
 - Webometrics, Almetrics
- Globalization of Information (Global Villages)
- Information Super highways
- Cyber Laws

Recommended Books for Study

1. Awad, E.M. System Analysis and Design 2nd Ed. New Dwlhi. Golgatia Publications (P) Ltd. 2000.
2. Curtis, G. Business Information Systems: Analysis Design and Practice, London: Wisley Publishing Company, 1990.
3. Gerald, J.F. and Gerald, A.F. Fundamentals of System Analysis: Using Structured Analysis and Design, 3rd ed. New York: John Wiley & Sons, 1987.
4. Hirwade, M.A. and Anil W. Hirwade. Chicago Style Manual. Nagpur, Payal Publication, 2008.
5. Hussain, K.M. and Hussain, D. Information Systems: Analysis, Design and Implementation, New Delhi: Tata McGraw Hill, 1995.
6. Rowley, J. The Basics of System Analysis and Design for Information Managers, London: Clive Bingley, 1990.

MLISc- II (CBCS) SEMESTER- IV

4T2

INFORMATION ANALYSIS, REPACKAGING AND CONSOLIDATION

Unit-I: Information analysis and Consolidation

- Definition, Concept and Need
- Methods of Information analysis
- Abstracting: Types, Techniques, Standards and Guidelines

Unit-II: Packaging, Repackaging and Consolidation

- Content analysis
- Packaging and Repackaging
- Methods of Consolidation: Prerequisites and Steps
- Tools for Consolidation

Unit-III: Information Consolidation Products

- Nature, concept and different types Consolidation Products
- Design and development of Information Products
- Tools and Techniques
- Electronic Content Creation
- Marketing of Information services and Products
- Evaluation of Information Products
- Recent Trends in Information analysis Consolidation and Repackaging

Unit-IV: Information Agencies and Trends

- Information analysis Centres (IAC): Planning and Management
- Government and Non-Government Information Agencies: NISCAIR, NASSDOC, DESIDOC, SENDOC, PIS etc

Recommended Books for Study

1. Bhat, S. G. Mahiti Prakriya wa Tantrik Lekhan, Nagpur: Pimpalpure Books Distributors, 2014
2. Bhattacharya, G. DRTC Annual Seminar on IA+C: A Review (DRTC Annual Seminar, 18, 1981;Paper IA).
3. Brandreth, M. Specialised Information/Analysis Centres in International Development: Report of a meeting held at Montebellow, Quebec, Canada 4-8, October, 1982. 12DC Manuscript Series. March, 1984.
4. Bryson (J.O.) Effective Library and Information Centre Management, USA Gower Publishing Company, 1980.
5. Chandra, A. and Saxena, P. Style Manual for Writing thesis, Dissertations and papers in Social Science. 1979. Metropolitan Book Co.Pvt. Ltd., Delhi.
6. Chatterjee, Amitabh. Elements of Information analysis, Consolidation and Repackaging, Calcutta. Prova Prakashan, 2014.
7. Dinesh, E. and Ramachandran, M. Organisation and set up of an Information Analysis Centers (DRTC Annual Seminar 18, 1981. Paper HB)
8. G.J. Narayana, Library and Information Management, New Delhi. Printice Hall India, Pvt.Ltd. 1991.
9. Gopinath, M.A. Typology of structural relations for Information Analysis and Consolidation Products: Feed Back and Evaluation: A case Study. DRTC Annual Seminar. 18: 1981, paper EA.
10. Kumar P.S.G. Information Analysis, Repackaging Consolidation and Information Retrieval. B.R. Publication Vol.9: Paper X & XI of UGC Model Curriculum, 2004. New Delhi.
11. Metcalfe, J.R. Organisation of information consolidation units: Centralised or Decentralised? Information Analysis and Consolidation: who page (Paper presented at the third meeting of UNISIST working Group on Information Analysis and Consolidation. Kaula Lumpur 12-16 September, 1983.
12. Sarcevic, T. and Wood, J.S. Consolidation of Information: A hand book of evaluation restructuring and repackaging of Scientific Technical Information. 1981. UNESCO, Paris.
13. Seetharama, (S). Costing of Information Systems and Services: Some General Considerations (DRTC Annual Seminar 24, 1990. Paper B).
14. Seetharama, S. (ed) Libraries and information Centres as Profit Making Institutions, New Delhi,Ess Ess Publication, 1998.
15. Seetharama, S. Evaluation measures in Information Retrieval System IASLIC Conference 1992.Chidamboram.
16. Seetharama, S. Guidelines for Planning of Libraries and Information Centeres, Calcutta, IASLIC,1990.
17. Seetharama, S. Information Consolidation and Repackaging. New Delhi, Ess Ess Publications,1997.
18. Seetharama, S. Information Consolidation and Repackaging: Frame work, Methodology, Planning. New Delhi: Ess Ess Publications, 1997.

**MLISC – II (CBCS)
SEMESTER IV**

**4T3
MODERN LIBRARIES**

Unit I: Modern Libraries

- Electronic Library: Definitions, Concept, development and Services
- Digital Library: Definitions, Concept, Objectives, Scope, Growth, development and Services
- Virtual Libraries: Definitions, Concept, Objectives, Scope, development and Services

Unit II: Organization of Digital Libraries

- Collection Development
- Image formats, Audio formats
- Storage Media Formats
- Digitization ,Tools and Process
- Equipments: Scanners, Digital Camera
- Intellectual Property Rights issues in Digitization: Copyright Infringement, Fair Use of digital information, Open access and Creative Commons

Unit III: Building Digital Libraries

- Hardware and Software, OCR, Image Editing Software
- Open Source Software: Dspace, Eprint, Greenstone, Fedora
- Metadata: Definition, Types, Creation, Standards
- Preservation Technologies
- Internet Security

Unit IV: Digital Library Initiatives

- Digital Libraries initiatives Worldwide
- Digital Libraries initiatives in India
- Institutional Repositories: Concept, Definitions and Importance, Steps in Creation of Institutional Repository, Institutional Repositories in India
- ETD Repositories: Concept, Definitions, Importance in Research, Initiatives in India and Worldwide

Recommended Books for Study

1. Dwivedi, S.C. Digital Library, Vol1 and 2. New Delhi: Shree Publishers, 2005.
2. Gopal, Krishan. Library Online Cataloguing in Digital way. Delhi:Authors Press, 2000.
3. Kaur, Amritpal. Internet: The Global Digital Library. Delhi: Vista International Publishing, 2010.
4. Lihitkar, S.R. Creation of Institutional Repositories: A Step by Step Approach.. Nagpur: Sai Publication, 2015.
5. Mittal Savita. Digital Library Resources. New Delhi: Ess Ess Publication, 2005.
6. Ojha, D.C. Advance in Library and Information Science. Jodhpur: Scientific Publisher, 2000.
7. Singh, G.K. Principles of Digital Library Development. New Delhi:Shree Publishers, 2004.
8. Singh, Ram Shobhit, ed. Encyclopaedia of Digital Libraries, Vol 1-2. New Delhi: Anmol Publication, 2008.
9. Verma, Kusum. Digital Library and Information Developments. Delhi: Vista International Publishing, 2008.

MLISc- II (CBCS)

SEMESTER- IV

4T4

INTELLECTUAL PROPERTY RIGHTS

UNIT I Fundamentals of Intellectual Property Rights (IPR)

- IP- Concept, Intellectual Property Rights, Industrial Property
- Facets of Intellectual Property Rights : Patents, Industrial Design, Trademark, Geographical Indication, Trade Secret
- IPR System in India
- World Intellectual Property Organization (WIPO)

UNIT II Patents

- Patents: Concept, Definition, Need
- Patent as a Primary Source of Information
- Patenting System in India, Registration Process
- Patent Databases: Indian, International (USPTO, Espacenet)

UNIT III Industrial Design, Trademarks and Geographical Indication

- Industrial Design: Need and Advantages, Industrial Design System in India
- Trademark: Need, Advantages, Types, Trademark System in India, Trademark Databases

- Geographical Indication: Need, Advantages, Registration Process in India, Indian Geographical Indication Database

UNIT IV Copyright, Plagiarism and Traditional Knowledge

- Copyright System in India, Indian Copyright Act, Fair Use and Copyright Infringement
- Plagiarism: Concept, Definition, Types, Plagiarism detecting Software (Open Source, Urkund, Turnitin, iThenticate)
- Traditional Knowledge: Concept, Definition, Need for Protection, Biopiracy, Cases of Biopiracy in India, Traditional Knowledge Digital Library

MLISc- II (CBCS) SEMESTER- IV

4T5

ELECTIVE- I

ARCHIVALS, MUSEUMS AND ARCHEOLOGICAL INFORMATION SYSTEM

Unit I: History and Development

- **Archives:**
 - History and Development of Archives in India
 - Objectives and Functions
 - Types of Archival Centers
- **Museums**
 - History and Development of Museums in India
 - Objectives and Functions
 - Types of Museums

Unit II: Collection, Organization and Management

- Collection of Archival and Museum
- Acquisition, Classification, Cataloguing and Indexing of Archival Material
- Source Material on archives, Manuscripts
- Machine Readable and Microfilming of Archival Records
- Databases and Digitization of Archives
- Building Design, Planning and furniture and fittings

Unit III: Preservation of Archives

- Objectives and Purpose
- Causes of Deterioration
- Environmental Pollution: Physical, Chemical and Atmospheric

- Biological Enemies of materials: Moulds, Fungi, Insects and Rodents

Unit IV: Rehabilitation of Documents

- Cleaning, removal of stains
- Fumigation and Deacidification
- Repair and Restoration Techniques
- Lamination
- Standards for Storage condition

Recommended Books for study

1. Chakrabarti, B and Mahapatra, P.K. Library Collection: Selection and preservation, Calcutta: World Press, 1991.
2. Cook, M. The Management of Information from Archives. Hants, UK: Gower, 1986.
3. Hedson, J.H. The Administration of Archives, New York: Pergamon Press, 1972.
4. Henderson, K.L and Henderson, W.T. Eds: Conserving and preserving Library Materials. Illinois, University Graduate School of Library and Information Science, 1983.
5. Kumar, P.S.G. Archival Librarianship MLISc Elective paper: Kumar's Curriculum series in Library & Information Science 12, 2008, x, 368, 23cm, B.R. Publication, New Delhi.
6. Lihitkar, Shalini, R. Libraries and Information centres in Maharashtra. Pimpri: Pimpri Publication. Nagpur, 2012.
7. Peace, Nancy E Ed: Archival Chains: Managing the Historical Records in the Age of abundance. Lexington. Mass. Lexington Books, 1984.
8. Winger, H.W. Deterioration and Preservation of Library materials, Chicago: University of Chicago Press, 1970.

MLISc- II (CBCS) SEMESTER- IV

4T5

ELECTIVE- II BIOTECHNOLOGY INFORMATION SYSTEM

Unit I: Biotechnology Growth and Development

- Growth and development of Biotechnology Education in India
- Growth and development of Biotechnology Research in India
- Role of Libraries in Biotechnology Research and extension
- Development of Biotechnology Institutes and their libraries in India
- Biotechnology Information Systems and Networks : Biotechnology and allied Information Systems in India – BTIS: Structure and Organization
- Networking and Resource Sharing in Biotechnology Information Systems

Unit II: Information Sources and Services, Products and Centres in Biotechnology

- Information Sources in Biotechnology:
 - Documentary
 - Non-Documentary

- Electronic Resources
- Biotechnology Databases
- Biotechnology Services and Products:
 - Information Services rendered to faculty and research scholars
 - Web based Services
 - Advanced Information Services and Products
- Biotechnology Information Centres
 - National
 - International

Unit III: Organisation and Management of Resources

- Biotechnology Information: Collection, Organization, Processing and Dissemination
- Developing Skills of Personnel
- Managing the finance: Funds, Generation of extra financeaa, Programmes and Projects

Unit IV: Information Needs of the Users and Professional Associations

- Special information needs of Biotechnology faculty
- Special information needs of Biotechnology Research workers
- User studies of Local Biotechnology Research Organizations
- Preparing a report on user needs (survey)
- Professional associations and their Role in Biotechnology

Recommended Books for study

1. Allent Kent. Encyclopaedia of Library and Information Science Vo. Mercel, New York.
2. Annual Report of Biotechnology Information System, 1998.
1. Annual Reports. Department of Biotechnology. Govt. of India, New Delhi.
2. Annual Reports of National Environmental Engineering Research Institute, (NEERI) Nagpur.
3. Biotechnology: Research Development and Demonstration: Thrust Areas. Department ofBiotechnology Annual Report 1993-94, Ministry of Science and Technology, Government ofIndia. Department of Biotechnology (2001)
4. Chaturvedi, Sachin. Asian Biotechnology Market. Emerging investment trends. Ag.Biotech. Net, CAB International, Vol. 1. March.
5. Chaturvedi, Sachin . Biosafety policy and implicative in India. Biotechnology andDevelopment Monitor No.30 March, 1997.
6. Directory of Biotechnology Equipments in India, DISC, NEERI, Nagpur, 1997.
7. Dubey, R.C. A Text Book of Biotechnology : New Delhi, S.Chand, 2004. P480.
8. Gangreddiwav, A.P. Information consolidation on Biotechnology, MLISc Project Report,RTM Nagpur University. Supervisor: D.Rajyalakshmi, Co-guide: MangalaHirwade, 2009.
9. Gilbirt, C.R. Biotech laboratories, Experiments, equipments and institutions .AnmolPublications, New Delhi, 2008. P. 245-295.
10. Jeevan, V.J. bioinformatics Resources on Internet, Library Herald Vo.40, N2, 2002, p271-287.

11. Kedar, A, Rajyalakshmi, C.D., and Gupta , Activities of Distributed Information sub centres of BTIS: An Overview. Proceedings of Environmental Biotechnology Symposium. 28-29 March, 1994, DISC, NEERI, Nagpur.
12. Lihitkar, S. Information Systems and Networks in India Today and Tomorrow Pub. New Delhi, 2012.
13. Lihitkar, Shalini, R. Libraries and Information centres in Maharashtra. Pimplapure Publication . Nagpur, 2012.
14. McGraw Hill Encyclopaedia of Science & Technology.
15. Padole, K. Directory of Biotechnology Educational and Research Institutions in India. MLISc project report, RTM Nagpur University, Supervisor: D.Rajyalakshmi. (2005)
16. Pental, Deepak . Plant molecular biology and biotechnology in India. Plant molecular biology reporter Vol.16, p.93-97.
17. Rajyalakshmi, D, Kedar, A and Gupta, A. Biotechnology Databases and their Access facilities in India. In International Conference BIOCHEM'97. Dean 26-28, Dept. of Biotechnology, Nagpur University, (DISC, NEERI, Nagpur).
18. Sharma, K.H. A study of biotechnology related research institution libraries in Nagpur city. MLISc project report. RTM Nagpur University. Supervisor: Nikose, S.M. (2005).
19. Shewale, J.G. Biotechnology in Healthcare (No.6) National Institute of Science Communication CSRR, Govt. of India. Dissemination of biotechnology of information DBT.2000 p. 33-37.
20. Sugdev, S.S. Study of Distributed Information sub centres of BTIS. MLISc project report RTM Nagpur University. Supervisor D.G. Kapde.(2005).

**MLISc- II (CBCS)
SEMESTER- IV**

4T5

ELECTIVE- III

ENGINEERING AND TECHNOLOGICAL LIBRARY AND INFORMATION SYSTEM

Unit I : Engineering and Technological Education and Research

- Growth and development of engineering and technology education and research in India.
- Development of Engineering and Technology Libraries in India
- Role of Engineering and Technology Libraries in India
- Role of Agencies in growth and development of Engineering and Technology Libraries in India

Unit II : Engineering and Technological Sources, Services and Product

- Information Sources : Engineering and Technology
- Documentary and Non-documentary Sources

- Electronic resources : Open Access and Commercial
- Databases : offline and online
- Web based Services
- Information services rendered to faculty and research scholars
- Resource sharing, networks and consortia

Unit III : Organization and Management of Resources

- Organisational Structure
- Collection, Processing and Dissemination
- Managing the finance, sources of finance, budget
- Programmes and Projects
- Developing skills and competency of personnel, responsibility and duties

Unit IV : Information needs of users and Professional Associations

- Information needs of faculty members and students
- User studies of engineering and technology libraries (one report)
- Preparing a report of one engineering and technology libraries
- Professional associations
- Engineering and technological centers
- Information Literacy Programme
- Norms and Standards

Note: Reading list to be provided by the concerned teacher.

SEMISTER –IV

PRACTICE

4P1 Information Technology Applications (Part II)

Marks – 100

- **Internet Searching from Websites – E-Books, E-Reference Sources, OCLC Database, WebOPAC, DOAJ, DOAR, DLIST, E-Print**
- **Social Networking Sites**
- **Evaluation of Library Webpages**
- **Creation of Weblogs**
- **Hands on Experience on any Digital Library Software**
- **Uploading of data in disciplinary archives**
- **Scanning and digitizing documents**

4P2 Project Work Report

Marks – 150

VIVA VOCE

Marks - 50

