M.LIB & I.Sc. SEMESTER – II
ML 21 : Research Methodology and Statistical Techniques

Total Credits: 04   **Total Lectures: 60**

Learning Outcomes:
After thoroughly studying this paper, students will be able to
1. Understand the concept of research in library and information science.
2. Comprehend the need and importance of Research Methodology in LIS.
3. To know and understand research design.
4. Acquire deep understanding of various research methods and techniques.
5. Understand the use of various data collection tools & statistical techniques for research.

Unit- 1: Introduction to Research
➢ Research: Meaning, Definition, Purpose, Scope, Objectives
➢ Research Process, Philosophy and Strategy
➢ Research Model and Instrument
➢ Research Problem and Proposal

Unit- 2: Design of Research.
➢ Nature, Meaning, Purpose, Objective
➢ Characteristic Perspectives and Types of Research
➢ Spiral Scientific Method
➢ Research Design
➢ Quantitative Research

Unit- 3: Research Methods and Techniques.
➢ Nature, Meaning, Objective
➢ Research Methods
➢ Research Methods in LIS
➢ Content Analysis
➢ Field Study
➢ Future Research: Delphi Techniques

Unit- 4: Data Collection and Presentation.
➢ Nature, Meaning, Objective
➢ Literature Review
➢ Methods of Data Collection
➢ Social Survey
➢ Interviewing
➢ Observation: Participant and Non Participant
➢ Sampling
➢ Measurement of Attitude
➢ Questionnaires
➢ Bibliolmetrics to Webometrics

Unit- 5: Statistical Methods in Library and Information Science.
➢ Meaning, Purpose, Objective
➢ Qualitative Data Analysis
➢ Classification of statistical methods
➢ Statistical Package

Reference List-
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2. Gupta, C.B.: Statistical Methods, Ed.4, H.N. Publication, New Delhi, 1972.
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4. Busha, C.H. and Harter, S.P.: Research Methods in Librarianship: Techniques and Interpretation, New York: Academic Press, 1980.
5. Whitney, F.L.: Elements of Research, New York: Prentice Hall, 1954.
6. Stevens, Rolland E.: Research Methods in Librarianship, London: Bingley, 1971.
7. Mandotkar, Ratna & Sahu, Santoshkumar:Research in Digital Library, Delhi: Pacific Book International, 2013
8. Mahajan, S.G.: Hasat Khelat MPhil Kara, Pune: Universal Publication,2013
9. Kumbhar,Rajendra : Research in Librarianship(Marathi), Pune: Universal Publication, 2013
10. Mandotkar,R and Sahu S.K. :Research in Digital Library,Delhi: Pacific Books International, 2013
11. Mandotkar,R and Sahu S.K. : Research in Library Automation, Delhi: Pacific Books International, 2013
12. For the Reference use of Relevant Study Material Prepared by the IGNOU, New Delhi and YCMOU, Nasik.etc…

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Ml 22 : Application of Information Technology In LIS : Theory

Total Credits: 04   **Total Lectures: 60**

Learning Outcomes:

After thoroughly studying this paper, students will be able to
1. Understand the concept of information technology in library and information science.
2. Plan and implement automation in library housekeeping operations and services
3. To know and understand resource sharing and library networks
4. Discuss of internet: it's Scope, services and applications in library and information centers.
5. Acquire deep understanding of database design and management.

Unit 1: Information Technology (IT):

- Concepts, Definition, Components, Importance in Library and Information Centre and future of IT.
- Computer Technology: Benefits of Computers, Need of automation in Library and Information Centre, Storage media (Magnetic, Digital, Official etc.).
- Communication Technology: Bounded and unbounded media (Twisted pair, coaxial, Fiber optics, Radio Frequency, Wireless, Satellite etc.).
- Telephone Networks, Circuit Switching, message switching, packet switching etc. Fax and E-mail communication and its importance in Library and Information Services. Other Technologies: Barcode Technology, OCR Technology (Scanning), as Multimedia Technology etc. their applications in Library and Information Service.

Unit 2: Library Automation & IT in Library and Information Centre (LIC):

- Automation: its need and purpose, Important Softwares available, Selection Criteria for one Software, Computerized house keeping, (Acquisition, Serial Control, Circulation and other services).
- Electronic Library, Digital Libraries, and Virtual Libraries, their importance in IT era.
- Digital Library: Development, Prereplesole Benefits, Services, Functions etc.
- Importance of Electronic Publishing.

Unit 3: Resource Sharing and Library Networks:

- Library Cooperation, Resource Sharing, Library Networking – Need in LIC.
- Important Computer Networks.
- Communication Networks.
- Library Networks (Role in Resource Sharing with example).
- Services offered by library networks.
- Network based library resources.

Unit 4: Internet:

- Internet: its Scope, services and applications in LIC, Benefits to LIC and libraries.
- Intranet and extranet.
- Copy right issues in Digital

Unit 5: Database Design and Management:

- Database: Definition, Concepts, and approach.
- Important Concepts in building databases.
- DBMS: Need, Architecture, Functions, Benefits over file system.
- RDBMS.
- Artificial Intelligence and Knowledge base.

References List-

➢ Kumar, P.S.G.: Information Technology: Basics, B.R.Publications, New Delhi, 2003.
➢ Kumar, P.S.G.: Computerization of Indian Libraries, B.R.Publications, Delhi, 1987.
➢ Hunt, Roger and Shelley John: Computers and Commonsense, 3rd Ed. New Delhi, Prentice Hall, 1987.
➢ Subramanian N.: Introduction to Computers, New Delhi, Tata McGraw Hill, 1990.
➢ Rajaraman, V.: Fundamentals of Computers, New Delhi, Prentice Hall, 1991.
➢ Artandi, S.: Introduction to Computer in Information Science, 1972.
➢ Lancaster, F.W.: Information Retrieval Online, 1973.
➢ Davis, G.B.: Computer Data Processing, McGraw Hill, New York, 1973.
➢ Ravichandra Rao, I.K.: Library Automation, Wiley, New Delhi, 1991.
➢ Phadake D N,Granthalayen sanganakiran aani audhunikikarn Universal books Pune 2012

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ML 23 : Information Processing and Retrieval

Total Credits: 04   **Total Lectures: 60**

Learning Outcomes:

After thoroughly studying this paper, students will be able to

1. Acquire deep understanding of thesaurus including structure and functions..
2. To know and understand the structure of bibliographic description.
3. Analyze the aspects of indexing technique.
4. Understand information storate and retrieval systems
5. To develop skills for information retrieval.

Unit 1 : Thesaurus: Its Structure and Functions.
 ➢   Objectives, Nature, Meaning, Definition
 ➢   Stucture and Functions

Unit 2 : Bibliographic Description:
 ➢ Standards for Bibliographic Record Format.
 ➢ Overview of Bibliography & its Description
 ➢ Bibliographic Description of Non-print Media. Objectives, Bibliographic Description, Non Print Media, Bibliographic Description of Non-print Media

Unit 3: Indexing:
 ➢ Objectives, Nature and Meaning.
 ➢ Concepts and methods Index, Indexing, and Indexing Theory.
 ➢ Types of Indexing.
 ➢ Pre & Post co-ordinate indexing systems and citation indexing.
 ➢ Indexing languages and vocabulary control.

Unit 4: Information storage and Retrieval Systems:
 ➢ Nature and Meaning,
 ➢ Objectives, Operation and design,
 ➢ Compatibility and Evaluation.

Unit-5: Information Retrieval:
 ➢   Objectives, Nature and Meaning.
 ➢   Information Retrieval Process
 ➢   The Process of searching
 ➢   Search strategies
 ➢   Common Command languages.
 ➢   Multiple Database searching.

References List-
 ➢ Needham, C.D.: Organising Knowledge in Libraries. Ed.2, London: Andre Deutsch, 1971.
 ➢ Turner, Christopher: Organising information: Principles and Practice, London: Clive Bingley, 1987.
 ➢ Shera, J.H.: Documentation and Organization of Knowledge, edited by D.J. Foskett, London: Lokwood, 1966.
 ➢ Bradford, S.C.: Documentation, London, 1948.

- Turner, Christopher: Organising Information: Principles and Practice, London: Clive Bingley, 1987.
- Rangnathan, S.R.: Prolegomena to Library Classification, Ed.3, Banglore: Sarada Rangnathan Endowment, 1989.
- Chan, Lois Mai: Cataloguing and Classification: An Introduction, New York: McGraw Hill, Chap. 12-14, 1985.
- Foskett, D.J.: Classification and Indexing in the Social Sciences, Ed.2, London: Butterworth, 1974.
- Aitchinson, J. and Gilchrist, A.: Thesaurus Construction, A Practical Manual, ASLIB (1972).
- Avram, H.D.: International Standard for the Interchange of Bibliographic Records, Library Resources and Technical Services, 20(1) pp 25-35.

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ML 24 : Application of Information Technology in LIS : Practical

Learning Outcomes:

After thoroughly studying this paper, students will be able to

1. Develop skills for install the soul library management software's
2. Understand the application of library management software for housekeeping operations.
3. Prepare different types of report using library management software.
4. Acquire deep understanding for search information from internet and databases adopting suitable search strategies
5. Find bibliographic information from WebOPAC, WorldCat, IndCat

Unit:
- Use and operate "SOUL" software package, Open source software's - E-Granthalay
- Create a Database.
- Internet use for Library functions
- Searching Online Database, & Information Sources on Internet based library services
- Visit to Information Centers where Digital Library concepts are initiated.
- Institutional Repository UGC INFONET, JCCC, INFLIBNET, DELNET, N-LIST EBSECO, J-Gate, IEEE, etc…..

Ml 25 : Library and Users

Total Credits: 04   **Total Lectures: 60**

Learning Outcomes:

After thoroughly studying this paper, students will be able to

1. Understand the nature of users
2. Organize library orientation programmes for library users.
3. Offer extension and outreach services to different categories of users
4. Acquire deep understanding of user survey.

Unit-1: Users

- Categories of users
- Information needs definitions and models
- Information seeking behavior

Unit-2: User Education

- Importance planning and organization of user studies
- Method techniques and strategies of user studies
- Sampling, interviews, questionnaire, diary and observations

Unit-3: User study

- User Community ; their characteristics, User Study
- Library and Education : Formal, non-formal and distance education.
- Community information centres and services
- Library Extension Services

Unit-4- User Survey

- Characteristics and Types of user and their needs
- Information Seeking Behaviour
- Information Litreacy

References and Readings:

- American Library Association: Information for a new age: Redefining the librarian. Chicago: ALA, 1995.
- Eisenberg, Michael B., Lowe Carrie, A and Spitzer Karthleen, L. Information Literacy: Essential Skills for the information age. London: Libraries Unlimited, 2004.
- Gaur, Ramesh C. RE-engineering Library and Information Services: Process, People and Technology, Mumbai: Allied, 2003.
- Grassiam, E.S and Kaplowitz, J.R. Information Literacy Instruction: Theory and prctice. Edison NJ: Neal Schuman, 2001.
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- http://www.unesco.org/courier/1998_12/uk/dossier/txt21.htm
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- Krishna Gopal. Digital Libraries in electronic information era. New Delhi: Authors, 2000.
- Landbooks for the 21st century. Eaglewood: Libraries unlimited, 1994.
- The Puzzle of the knowledge society. European Foundation of the Improvement of Living and Working Conditions. Papers presented at the Irish Presidency Conference Foresight for innovations- thinking and debating the future: shaping and aligning policies. Dublin, 14-15 June 2004.

ML 26 : Social Science and Information System

Total Credits: 04   **Total Lectures: 60**

Learning Outcomes:

After thoroughly studying this paper, students will be able to

1. To know and understand the structure and development of social sciences
2. Understand, identify and explore the different types of information sources for social science information system.
3. Understand the nature and role of Social Science Information Systems.
4. Prepare planning of social science research libraries

UNIT – I: Structure and Development of Social Sciences

➢ Definition, Scope, Landmarks and Research Trends in the disciplines of Political Science, Public Administration, Economics, Management, Sociology, History, Psychology and Education.

UNIT – II: - Social Science Information System:

➢ Components. - Sources: Types and Media: Print and Non – Print, Electronic and Web-based - Institutions connected with Social Science Information Generation and Dissemination. - Study of the activities of: ICSSR, ICWA, Indian Institute of Management - Ahmedabad, Indian Institute of Public Administration, National Council for Applied Economic Research, National Institute of Public Finance and Policy, TISS, UNESCO, ICHR, London School of Economics and Political Science.

UNIT – III: - Planning of Social Science Research Libraries. –

➢ Evaluation of existing Information Systems and Networks in Social Sciences at National and International level

Reference List

➢ WEBB (William H), Ed. Sources of information in social sciences.
➢ HERRON (Nancy), Ed. Social Sciences: A Cross disciplinary guide to selected sources. 1996. Libraries Unlimited.
➢ HUNT (Elgin F) and COLANDER (David L). Social sciences: An Introduction to the study of society. Ed. 9. 1995. Allyn.
➢ LI (Tze Chung). Social science reference sources: A Practical guide. Rev and enlarged ed 2. 1990. Greenwood.
➢ VYAS (SD). Social science information in India: Efforts toward bibliographic control. 1992. Concept, New Delhi.