

University of Pune

REVISED SYLLABUS FOR ONE YEAR MLISc WITH SEMESTER AND CREDIT SYSTEM

M.Lib.I.Sc. (One year course-Semester Pattern)

Syllabus
2013-2014

1. **Title of the course: Master of Library and Information Science(M.L.I.Sc.)**
2. **Duration of the Course: One year (Two Semesters credit system)**
3. **Objectives of the Course:** Master of Library and Information Science(M.L.I.Sc.) of one year duration with semester and credit system has following objectives:-
 - a) To train the students in the advanced skills of information/knowledge gathering, processing, organization and retrieval.
 - b) To inculcate managerial skills in the students for planning & management of LICs.
 - c) To develop research skills in students & enable them to carry out research in LIS.
 - d) To provide thorough understanding of IT application in information environment including network and communication systems.
4. **Introduction:** Master of Library and Information Science (M.L.I. Sc.) course is conducted in following colleges:-
 1. H.P.T. Arts and R.Y.K. Science College, Nasik
 2. Abasaheb Garware College, Pune
 3. C.T. Bora College, Shirur
 4. Tulajaram Chaturchand College, Baramati
5. **Eligibility:** A candidate who has secured B.Lib.I.Sc. degree from any Indian University with at least 55% marks
6. **External Students-** This course is not open to external students. **Only full time regular students are eligible for this course.**

7. Structure of the Course:

a) Compulsory papers:

Semester – I (Total 16 Credits)

Theory:

Paper No.	Title of the Paper	Ext.	Int.	Total
ML – 101	Information, Communication & Society	50	50	100
ML – 102	Introduction to Research Methodology & Statistical Techniques of Research	50	50	100
ML – 103	Information Retrieval	50	50	100
ML – 104	Information Technology: (Theory)	50	50	100
Total Marks				400

Semester – II (Total 16 Credits)

Theory:

Paper No.	Title of the Paper	Ext.	Int.	Total
ML – 201	Management of Libraries & Information Centres	50	50	100
ML – 202	Bibliographic Control & Information Systems	50	50	100
ML – 203	Information Technology Applications: Practical	50	50	100
ML – 204	Project			100
Total Marks				400
Grand Total				800

c) Medium of Instruction-English

d) Medium of writing examination-English & Marathi

8. University terms

For the award of Master of Library & Information Science (M.L.I.Sc.) a candidate should fulfill the following conditions:-

- i) He/She shall have kept two terms for the Degree Course in Library & Information Science conducted by the University of Pune and
- ii) He/She shall have completed the prescribed course to the satisfaction of the concerned Head of the Department.
- iii) **A student should have attended at least 75% of the total number of lectures and practicals in the said course, and shall have secured at least 40% of marks in termwork.**

A student, who does not thus obtain 40% of marks in the termwork, will have to keep fresh terms.

9. Examination:-

A) Total marks and their allocation per paper

i) Semester I –Four Theory Papers	= 400 Marks
ii) Semester II- Two Theory Papers	= 200 Marks
One Practical	= 100 Marks
Project	= 100 Marks
Total	= 800 Marks

B) Pattern of Question paper:

Theory:

1. Question paper will be of 50 marks and questions will be asked from all the units of the syllabus.
2. Question paper will consist of four questions and all the questions shall be compulsory.
3. The duration of the paper will be two hours.

Practical:

1. Question paper will be of 80 marks and question will be asked from all the units of the syllabus.
2. Question paper will consist of four questions and all the questions shall be compulsory.
3. The duration of the paper will be of two hours.

10. Subject wise detailed syllabus: (enclosed herewith)

11. Recommended books: (list attached)

B) Standard of Passing:-

C) ATKT Rules: -

D) Award of Class:-

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Syllabus
2013-2014
Semester – I (Total 16 Credits)

Theory:

Paper No. Title of the Paper	Ext. Int. Total
ML – 101 Information, Communication & Society	50 + 50 = 100
ML – 102 Introduction to Research Methodology & Statistical Techniques of Research	50 + 50 = 100
ML – 103 Information Retrieval	50 + 50 = 100
ML – 104 Information Technology: (Theory)	50 + 50 = 100
Total marks	= 400

Semester – II (Total 16 Credits)

Theory:

Paper No. Title of the Paper	Ext. Int. Total
ML – 201 Management of Libraries & Information Centres	50 + 50 = 100
ML – 202 Bibliographic Control & Information Systems	50 + 50 = 100
ML – 203 Information Technology Applications: Practical	50 + 50 = 100
ML – 204 Project	100
Total marks	= 400
Grand Total marks	= 800

ML – 101 INFORMATION, COMMUNICATION AND SOCIETY

Objectives:-

- 1. To introduce to the students the concept of Information & its Communication in Knowledge Society.**
- 2. To familiarize the students with professionalism & LIS Education**
- 3. To introduce students with the concept of Economics of Information and Information Industry & Knowledge Management.**

	TOTAL NO. OF CREDITS = 4
UNIT 1 1 CREDIT	Information , Communication & Knowledge Society 1.1 Information: Characteristics & Properties of Information, Use of Information in R & D, Business and Industry, Planning & Policy making, Management and Decision Making 1.2 Information & its communication: meaning, forms and channels of communication, formal and Informal communication, models of communication, scientific communication, barriers of communication, library as a channel of communication. 1.3 Knowledge Society and the Library : Knowledge Society: Genesis, Characteristics and Implication & Changing Role of LIC& professionals in Knowledge Society
UNIT 2 1 CREDIT	Unit 2 Library and Information Science Education & Professionalism 2.1 Library and Information Science Education: definition of professional education, components of professional education, LIS as a discipline, levels & curriculum of LIS Education in UK, USA and India, methods of teaching and evaluation in LIS Education ,Accreditation of LIS Education in India, UK,& USA 2.2 Professionalism: definition of profession & its characteristics, definition of Librarianship & changing role of library profession, role of professional associations in promoting librarianship, professional ethics(definition, concept, need & purpose)
UNIT 3 1 CREDIT	Information and Knowledge Management 3.1 Information Management : concept & methods 3.2 Knowledge Management : definition, objectives, methods & tools
UNIT 4 1 CREDIT	Economics of Information 4.1 Concept, and Substance of Economics, Economics of information 4.2 Economic Characteristics of Information as a commodity 4.3 Information & Knowledge Industry -definition & kinds of knowledge industry (to be listed only) Information Industry Components: Generators, providers & intermediaries of Information

ML-102 INTRODUCTION TO RESEARCH METHODOLOGY & STATISTICAL TECHNIQUES OF RESEARCH

Objectives:-

1. To introduce application of Research Methodology in LIS and inculcate research skills among the students.
2. To understand the use of various data collection tools & statistical techniques for research
3. To give exposure to current trends of Research in LIS.

TOTAL NO. OF CREDITS = 4	
UNIT 1 1 CREDIT	<p>Research & Research Design</p> <p>1.1 Research: definition, characteristics, objectives, types of research-Pure, Applied research including interdisciplinary and multidisciplinary research & ethical aspects of research</p> <p>1.2 Research Design: definition, steps in research, identification of problem, literature search, hypothesis, designing research proposal</p>
UNIT 2 1 CREDIT	<p>Research Methods, Research techniques and Tools</p> <p>2.1 Research Methods: ,historical method, descriptive method, survey method, experimental method, case study method, future research, Bibliometrics-concept, definition, laws,methods:content analysis, citation analysis evaluation research, comparative Librarianship, Introduction to Webometrics,Informetrics, Scientometrics, Librametry, Sociometry</p> <p>2.2 Research techniques and Tools : Questionnaire, Interview, Observation, Scales and Check lists, Sampling techniques :definition, purpose, types (probability & non-probability)</p>
UNIT 3 1 CREDIT	<p>Data Analysis and Interpretation</p> <p>3.1 Preliminary Analysis-data editing, classification, tabulation, graphic presentation</p> <p>3.2 Statistical Analysis-concept, Descriptive Statistics (measures of central tendency; dispersion-range, variance, standard deviation; correlation), Inferential Statistics (regression-linear & non-linear, Z-T test, chi-square test), Statistical Packages- SPSS</p>
UNIT 4 1 CREDIT	<p>Research Reporting,</p> <p>4.1 Research Reporting: structure, style & contents, style manual-Chicago, MLA, APA, citations of print and electronic sources</p> <p>4.2 Current trends in LIS research</p>

ML-103 INFORMATION RETRIEVAL

Objectives:-

1. To understand use of indexing techniques, vocabulary control & search strategies for Information Storage & Retrieval.
2. To familiarize students with Information retrieval models and develop skills in designing thesaurus.
3. To introduce Consolidation & Repackaging of Information into Information Products.

	TOTAL NO. OF CREDITS = 4
UNIT 1 1 CREDIT	Information Storage and Retrieval 1.1 definition, purpose, components and types of information retrieval system 1.2 Role of Indexing in Information Retrieval Types of Indexing- pre-coordinate(Dr.S.R.Ranganathan's Chain indexing, PPSI, PRECIS, SLIC), post coordinate (UNITERM) and automatic Indexing (KWIC, KWAC, KWOC) 1.3 Indexing languages and vocabulary control: definition, purpose & tools Thesaurus- Structure , thesaural relationships & construction
UNIT 2 1 CREDIT	Retrieval of Information 2.1 Models for information retrieval: Input- Output Models and Theoretical Models. 2.2 Information search and search strategy : type of search- keyword search, Phrase search, keyword and subject search, truncation search, range search. Boolean logic and Venn Diagram. 2.3 Searching the web
UNIT 3 1 CREDIT	Evaluation of Information Storage and retrieval system. 3.1 Evaluation- need, types and criteria with example e.g. Cranfield Study and MEDLAR Test. 3.2 Current Trends in Information Retrieval: searching the web, open access repository and its creation, Portal- vortal, Datamining, Automatic text summarizing, Information standards and protocols.
UNIT 4 1 CREDIT	Information Repackaging and Products. 4.1 Information analysis, repackaging and consolidation: Concept, definition, packaging and repackaging. Information consolidation activities, need, steps in information consolidation and repackaging process and advantages. 4.2 Information Products: concept , types, design and development of information products. 4.3 Marketing of information products and services: concept, need, market research, price, marketing mix, factors influencing the market. 4.4 Trends in Information Analysis, Repackaging & Consolidation including electronic content creation & document delivery

ML - 104 INFORMATION TECHNOLOGY: BASICS

Objectives:-

1. To introduce the concept & use of ICT and its application in Libraries and Information Centres.
2. Development of skills in planning and implementation of library automation
3. Study of digital library, use of e-documents & current trends in the use of ICT

	TOTAL NO. OF CREDITS = 4
UNIT 1 1 CREDIT	Information & Communication Technology: Basics & Library Automation and Library Software 1.1 Information & Communication Technology: Basics of Communication technology, Components, transmission media (bounded , unbounded), transmission Mode (Simplex, half – duplex, full duplex, Multiplex), bandwidth (voice band, medium band, broadband)
UNIT 2 1 CREDIT	Networks & Internet 2.1 Networks: definition, media (Optical fiber, Ethernet, Network Interface Card, Hubs, Routers), switching techniques (Packet switching, circuit switching, cell switching),networks architecture (Peer to peer, client – server),OSI model 2.2 Internet : Brief History, Components ,connectivity (dial up, leased lines, ISDN – broadband, cable-internet, wireless , Internet over satellite), internet protocols(TCP/IP, HTTP, FTP),browsers & search engines :concept, types, examples, network based information services, Internet Security ,Intranet, Extranet
UNIT 3 1 CREDIT	Digital Library & Electronic Documents 3.1 Digital Library: genesis, definition, characteristics, objectives ,digitization-devices (Scanners, Cameras) software, Data Warehousing & data mining :concept, application in libraries,Metadata-Brief history, standards-Dublin Core Virtual Library-concept, hybrid library, electronic library DOAJ-concept Institutional repository-concept Content management-concept 3.2 Electronic Documents Multimedia-concept, elements, impact of multimedia on library services E journals-Nature, Acquisition, Evaluation criteria Databases-Definition, types (bibliographic, full text, statistical), e.g. Databanks-Evaluation criteria, e.g.
UNIT 4 1 CREDIT	Current Trends in ICT .Blogs, Wi-Fi, RFID, Subject Gateways, Portals, RSS Feeds, Twitter, Face book, Web 2.0, Web 3.0, Biometric Technology for library security, Open Source Software, Folksonomy, forums.

M.L.I.SC-SEMESTER II

MI-201 MANAGEMENT OF LIBRARIES AND INFORMATION CENTRES

Objectives:-

1. To study the functions of management & their application to librarianship.
2. To familiarize students with the concept of System Analysis, Management of Change , TQM & Marketing of LIS services.

	TOTAL NO. OF CREDITS = 4
UNIT 1 1 CREDIT	Management & its functions 1.1 Schools of management & approaches to management 1.2 Planning & Organizing 1.2.1 Planning: definition, need, types, principles, steps, policies & procedures, decision making, MBO, Building and Space management in LICs, Risk & Contingency management 1.2.2 Organization-structures, authority & its characteristics, delegation of Authority: modes, principles 1.3 Human Resource Management: concept, job analysis, job description & job specification, recruitment & hiring procedures, training & development, discipline & grievances, performance appraisal, motivation & leadership theories
UNIT 2 1 CREDIT	Financial Management 2.1 Budgeting techniques & methods -PPBS, ZBB 2.2 Budgetary control systems: cost-effectiveness & cost- benefit analysis 2.3 Outsourcing-concept, need, benefits, limitations, library services to be outsourced
UNIT 3 1 CREDIT	System Analysis & Design 3.1 Library as a system, system analysis & design 3.2 Monitoring & Control techniques: Management Information System, Network techniques- PERT/CPM 3.3 Performance Measurement & Evaluation Technique 3.3.1 Performance Measurement – concept, need, Performance Measurement in LICs, Time & Motion Study 3.3.2 Performance Evaluation of libraries- meaning, objectives, stages, areas, method, evaluation of library performance, SWOT analysis
UNIT 4 1 CREDIT	Total Quality Management, Change Management, Marketing of Library & Information Services 4.1 Total Quality Management: Concept, objectives, elements, techniques, quality audit, TQM for LICs 4.2 Change Management: Concept, forces of change, changes in procedure, types, steps, techniques, problems, Change Management in LICs Re-engineering- concept, steps, sources, Re-engineering in libraries 4.3 Marketing of Library & Information Services: Concept, need, market analysis, market segmentation, marketing mix, marketing audit, marketing of library products & services, promotion techniques including electronic media

ML-202 BIBLIOGRAPHIC CONTROL AND INFORMATION SYSTEMS

Objectives:-

1. To familiarize students with the meaning and tools for Bibliographical Control of Information.
2. To provide knowledge about the information systems and understand the rationale behind internationalization in information systems.

	TOTAL NO. OF CREDITS = 4
UNIT 1 1 CREDIT	Bibliographic control Concept, definition, aim, need. 1.1 UBC: concept and definition, needs and prerequisite to UBC at national and international level. 1.2 UAP: Historical background and IFLA's role, Objectives and scope. Book acquisition at National level, Inter Library Loan, International Agreement on Book exchange.
UNIT 2 1 CREDIT	Bibliographic organization in India 2.1 Government initiative- Delivery of book act, National Library- INB, RRRLF, (ISBN). 2.2 Bibliographic services in India- 2.3 Library Networks and Consortia: definition, need, objectives, use, activities ,services & examples (national & international) 2.4 Information and Documentation Centre in India: role, objective, scope, services & products– NISCAIR, NASSDOC, DESIDOC, SENDOC, DSIR, NCSI & IASLIC.
UNIT 3 1 CREDIT	Information policy 3.1 Information policy- Meaning, need ,importance, process of formulation, guidelines 3.2 International Policy Issues –UNESCO, IFLA, FID, ICSU/AB 3.3 Indian Initiatives- National Information Policy 1986, Right to Information Act, National Knowledge Commission 2008. 3.4 Intellectual Property Rights, Copyright Act –salient features, Copyright Act & Fair Use , plagiarism
UNIT 4 1 CREDIT	Information Systems: definition, objectives, need, importance and types. 4.1 UNISIST (Global Information system)-rationale, objectives, impact of UNISIST 4.2 NISSAT- history, structure, objectives, Activities, of NISSAT, Sectoral Centers- their field, scope and contribution. 4.3 International Information Systems. Subject scope, input-output processing, services& products e.g. INIS, AGRIS, IFIS, ASFIS, TITUS, DEVSIS, ASTINFO, BIOSIS, INSPEC, VINITI, INFOTERA, POPIN International etc. Commercial / Private Information systems- CAS, MEDLARS

ML – 203 Information Technology – Applications**100 Marks****Objective:-**

- 1. To provide students with hands-on-experience in the use of Library Software, CD and Internet Search.**
- 2. To develop skills in web page designing.**

	TOTAL NO. OF CREDITS = 4
UNIT 1 1 CREDIT	Using Library Software SOUL or any locally available library software. Creation & maintenance of bibliographic database of minimum 50 documents using SOUL or any locally available library software
UNIT 2 1 CREDIT	a.CD search :Study of minimum 5 CDs(text, graphic) b.Digitization of documents (scanning, OCR etc.)
UNIT 3 1 CREDIT	a.Web Search :Searching information on two subjects using various search strategies-Basic, Advanced, truncation, wild card, pearl citation,google scholar, N-list etc. b. Content management software
UNIT 4 1 CREDIT	Web Page Designing Open a Page, Create a New Page, and Give Pages a Consistent Look (eg.-themes), Add Page Elements (eg. Page Banner), Create Hyperlinks

ML-204 Project**Guided project****100 marks****Objective:**

- 1. To develop skills using research methods, techniques and tools.**

(80 marks for project and 20 marks for viva)

Internal and external examiners shall each assign marks out of 40 for project and 10 for viva which shall then be cumulated together.

Important Note:

1. Practical exam and viva for ML-203, ML-204 will be conducted in both semesters and examination will be conducted in Second Semester only.

M.L.I.Sc. Workload

Semester I

1. Theory Papers

Four lectures of 60 minutes per theory paper per week

No. of theory papers=4

No. of lectures per paper per week=4

Workload of theory papers=4x4=16 lectures

2. Seminar & Tutorial

Four lectures each i.e. 1x4=4 lectures

Total Workload for Sem I=16 lectures + 4 lectures = 20 lectures per week

Semester II

1. Theory Papers

Four lectures of 60 minutes per theory paper per week

No. of theory papers=2

No. of lectures per paper per week=4

Workload of theory papers=2x4=8 lectures

2. Seminar & Tutorial

Four lectures each i.e. 1x2=2 lectures

3. Practical Papers

Four lectures Practical of 60 minutes per practical paper per week

(Note:For Practical papers each batch shall have 12 students.)

(1 paper x 4 lectures x 2 batches =8 lectures)

Workload of practical papers=2x4=8 lectures

4. Project

Four lectures each i.e. 1x4=4 lectures

Total Workload for Sem II=8 lectures + 2 lectures + 8 lectures + 4 lectures = 22 lectures per week

Total Workload for Sem I & Sem II = 20 lectures+ 22 lectures = 42 clock hours

References for ML-101

1. Abell Angela and Nigel Oxbrow, *Competing with Knowledge: The Information Professional in the Knowledge Management Age*. London: Facet Publishing, 2001.
2. Blaise Cronin. ed. *Information Management :from strategies to action*. London Aslib,1985.
3. Bikowrtx W. R.: *Knowledge Management* Delhi PHI. 2000
4. Chorafas D. N. *Knowledge Revolution*. 1968.
5. Crawford, Marshali Jean: *Information Broking: a new career in information work*, London: L. A. 1988
6. Dhiman A.K.: *Knowledge Management for Librarians*.New Delhi: Ess Ess, 2009
7. Galatin, Malcolm & Laiter, Robert D eds. *Economics of Information* London : Nijhoff ,1981
8. Gurnsey, John and White Martin. *Information Consultancy* London Clive Binglev 1989.
9. Koenig Michael E.D. and Shrikantaiah(Ed): *Knowledge Management: lessons learned what works and what doesn't*, New Delhi: Ess Ess, 2008
10. Koenig Michael E.D. and Shrikantaiah T.K.(Ed): *Knowledge Management in Practice : connection & context*, New Delhi: Ess Ess, 2008
11. Kumar (PSG) *A Student's Manual of Library &Information Science* Delhi : BR Publishing House,2002
12. Kumar P.S.G.: *Fundamentals of Information Science*, New Delhi, S. Chand & Co. Ltd., 1998.
13. Laxman Rao (N), Vishwa Mohan (V) and Sudarshan Rao (S) Ed. *Changing Dimensions of LIS Education* Hyderabad : JATIIS, 2008
14. Machlup F & Manstfield, Uma eds. *The Study of Information Interdisciplinary Messages*.New York: Wiley 1983
15. Masuda Y. *The Information Society* 1980
16. Mc Garry, K.J *The Changing Contest of Information: an Introductory Analysis* London: Bingley. 1981.
17. Meadows, A. J. *Communication in Science*. London Butterworths
18. Nacgkyo J. *Knowledge its Creation Distribution and Economic Significance* V1 1980, V2 1982, V3 1984.
19. Nigam B.S. and Kataria S.: *Knowledge Management in the Digital Era*. New Delhi: Mahamaya Pub. House, 2008
20. Prasher, R.G. *Information and its communication* New Delhi: Medallion Press. 1991
21. Roberts, Stephen A Ed. *Costing and the Economics of Library and Information Services* London Aslib, 1984
22. Rozsa G. *Scientific Information and Society* 1973.
23. Shera JiI: *The Foundations of Education of Librarianship* Bombay : Asia, 1970.
24. Shrikantaiah T.K.: *Knowledge Management in Practice*, Information Today,2008
25. Wolpert S.A. Wolpert, J. Y. *Economics of information* 1986

References for ML-102

1. Charles H. Busha & Stephen P. Harter, Research Methods in Librarianship Techniques and Interpretation New York : Academic Press 1980.
2. Gopal (M.H.) An Introduction to Research Procedure in Social Science New Delhi, Vikas Pub. House 1992.
3. Goode (William J) and Hatt Paul K: Methods in Social Research New York : McGraw-Hill Book Co., 1952
4. Krishnaswami O.R.: Methodology of Research in Social Sciences. Bombay: Himalaya, 1993
5. Line Maurice B: Library Surveys: an introduction to the use, planning procedure and presentation of surveys 2nd Ed London Bingley, 1982.
6. Powell, Ronand R Basic Research Methods for Librarians Norwood : Ablex, 1985
7. Rao, Ravichander I. K. Quantitative Methods for Library and Information Science. New Delhi : Wiley Eastern, 1983.
8. Simpson J. L. Basic Research methods in Social Sciences: *The art of empirical investigation* , 1969
9. Stevens Rolland E. Research Methods in Librarianship London, Bingley , 1971.

References for ML -103

1. Atchison J. Gilechrist A: Thesaurus Construction: a practical manual, 1972.
2. Berson Alex, Smith Stephen & Kurt Thearling: Building Data Mining Applications for CRM New Delhi: TMH, 2000
3. Burke. Mary A: Organization of Multi Media Resources: principles and practices of information retrieval .Alder Shot : Gower ,1999.
4. Chernyi A. I. Introduction to Information Retrieval theory, 1973.
5. Choudhary G G: Infor Burke.Mary A: Organization of Multi Media Resources: principles and practices of information retrieval .Alder Shot: Gower 1999.
6. Chowdhury G. G. Introduction to Modern Information Retrieval 2nd edn. London:Facet Publishing 2003.
7. Foskett A.C. The Subject Approach to Information 4th ed. London Bingley, 1982
8. Gorman. G. E. , (Ed.) Metadata Applications for Management London : Facet Publishing 2003.
9. Lancaster.F. Wiltrid: Information Retrieval Systems: *Characteristics testing and evaluation* 2nd Ed. New York: Wiley, 1970.
10. Lancaster F. W.: Information Retrieval Systems: characteristics, testing and evaluation 1968.
11. Lancaster F. W. Indexing and Abstracting in Theory and Practice London: Facet Publishing, 2003.
12. Jean Atchison Et. al. & Alan Gilchrist. Thesaurus Construction : a practical Manual London : Aslib 2000
13. Precis Austin D.: A Manual of Concept Analysis and Subject Indexing 2nd ed. 1984.
14. Rowley Jennifer E.: Organising Knowledge: an introduction to information retrieval Aldorshot Gower 1987.
15. Shera JH and Egan, Me Bibliographic Organization, Chicago Unesco CCF, Paris : Unesco 1988.
16. Simmons P. & A. Hopkins: CCF : the common communication format parts : Unesco ,1984.

17. Van Rijsbergen C. J.: Information Retrieval 2nd ed. London : Butterworths 1970.
18. Vickery B.C. Techniques of Information Retrieval .London : Butterworths ,1970.

References for ML-104

1. Bandhyopadhyay, S Information Technology for Growth and Prosperity. New Delhi :1994.
2. Barbara Allan E-Learning and Teaching in Library and Information Services. London : Facet Publishing, 2002.
3. Black U. Emerging Communication Technologies. New Delhi : PHI.1994
4. Briank Williams, : Sawyer Stacet and Lutchinson, Sarah E. Using Information Technology: A practical introduction to computers and Communication New Delhi : TMH. (latest edition)
5. Brophy Peter The Library in the 21st Century : New Services for Information Age.London : LA, 2001.
6. Chadha R. K. and Gupta S. R. Eds. Information Technology. New Delhi : Sarita, 1995.
7. Chowdhury G. G and Chowdhury Sudatta: Searching CD-ROM and Online Information Sources London : Facet Pub Curtin. lishing, 2001.
8. Cooke Alison, A Guide to finding Ouality Information on the Internet 2nd Ed. London : Facet 2001.
9. Dennis P. & others. Information Technology : The Breaking Wave. New Delhi :TMH. Latest Edition
10. Dearnley James and Feather John: The Wired World: An introduction to the theory and practice of the information Society. London : Facet Publishing 2001.
11. Digital Library Technology Trends. Santa Clara : Sun Micro Systems, 2002.
12. Kaul, H. K. Information Networks : An Indian experience. New Delhi : Virgo 1992.
13. Malwad, NM and others, Digital Libraries : dynamic store house of digitized information New Delhi New Age, 1996.
14. Leon Alexis & Leon. Mathews Fundamentals of Information Technology Chennai : Leon Tech World, Latest Edition.
15. Leona Carpenter, Simon Shaw & Andrew Prescott: Towards the Digital Library London : LA, 1998.
16. Marlyn Deegan & Simon Tanner. Digital Futures Strategies for the Information Age.London : Facet,2001.
17. Rowley, J. E. : The Electronic Library 4th Edn. of Computers for Libraries. London : Facet Publishing 1998.
18. Smart D. Lee. Digital Imaging: a practical handbook London : Facet Publishing, 2000.
19. Vishwanathan I Communication Technology New Delhi TMH,1995

References for ML-201

1. Bryson Jo. Effective Library and Information Center Management Aldershot : Gower,1990.
2. Chapman Edward A. Pierre, Paul L. St. and Lubans John, Jr.: Library Systems Analysis Guidelines .New York: Wiley-Inter-Science, 1970.
3. Chowdhury G. G. Introduction to Digital Libraries. London : Facet Publishing 2003
4. Cowley John, Personnel Management in libraries, London : Bingley, 1982.
5. Cronin, Blaise ed. The Marketing of Library and Information Services. (Aslib Reader, Vol.4). London : Aslib,1981
6. Elias M. Awad Systems Analysis and Design New Delhi : Galgotia, 1995.

7. Ellis, Debbie and Norton, Bob. Implementing BS5750 ISO9000 in Libraries London : Aslib, 1993.
8. Evans. G. Edward : Management Techniques for Librarians edition New York, Academic Press, 1983.
9. Eileen Ellion de Saez :Marketing Concepts for Libraries and Information Services. 2nd ed London:Facet Publishing 2002.
10. Katz W. A. : Collection Development the Selection of Materials for Libraries, New York Holt,Rinehart & Winston, 1980.
11. Lancaster F. W. The Measurement and Evaluation of Library Services. Washington :Information Resources Press, 1977.
12. Lancaster F. W. If you want to evaluate library, London : LA 1988.
13. Maclachalan Liz. Making project management work for you. London : I. A. 1996.
14. Narayana G. J. Library and Information Management New Delhi PHI 1991.
15. Seetharama S. Guidelines for planning of Libraries and Information centers Calcutta : IASLIC, 1990.
16. Noragh jones & Peter Jordan :Staff Management in Library and Information Work Aldershot : Gower 1982.
17. Roberts, Stephen A, Ed. Costing and the economic of Library and Information Services.London ASLIB,1988.
18. Rizzo J. R. Management for librarians: Fundamentals and issues. West Port : Green Wood Press,1980.
19. Underwood, Peter G. :Managing Change in Libraries and Iinformation Services : a systems approach London : Clive Bingley, 1990.
20. Roshan Raina :TOM in Library & Information Services. New Delhi : Infuse ,1999.
21. Rama V. Rama Analysis and Design of Information Systems New Delhi : PHI, 1991.

References for ML-202

- 1.Davinson, Donald, Bibliographic Control London : Clive Bingley 1975
- 2.Lancaster F. W. & Smith. L.C.: Compatibility Issues affecting Information Systems and Services. Paris : Unesco 1987