Doctor Harisingh Gour Vishwavidyalaya

M.Lib.I.Sc: FIRST SEMESTER

Knowledge Organisation and Information Processing:
Advanced Classification Theory

Unit-I: Information and Knowledge

      Information: Growth and development
      Knowledge: Structure, types and attributes
      Modes of thinking: Authority Centered, Tenacious, Speculative and Positivistic
      Modes of formation of subjects

Unit-II: Classificatory Principles

      isolates and categories: comparative study
      Normative Principles of W.C.B. Sayers, H.E. Bliss and S.R. Ranganathan
      Notational Systems: Principles, capacities and telescoping of array
      Indicator Digits
      Comparative study of UDC and CC: Basic principles, subject representation, notational system and revision policy

Unit-III : Recent Trends in Classification studies

      Trends in classification
      Contribution of CRG, DRTC, ISKO
      Design of depth classification scheme
      Web Classification, Problems of Classification in electronic documents

Information Storage and Retrieval

Unit-I Information Storage and Retrieval System
-Definition, scope and components
-Databases:
-Information storage and file organization.
-Artificial intelligence: Expert systems and Natural Language Processing.

Unit-II Subject Indexing and Abstracting.
-Study of Citation indexing.
      Automatic indexing.
-Canons of Abstracting.
      Auto-Abstracting.
-Information Consolidation and Repackaging

Unit-III Information Searching, Retrieval and Evaluation of IR Systems
      Web Browsers, Search Engines
-Search techniques: Online Searching techniques and retrieval.
-Evaluation of IR system.
-Important test result: Cranfield, MEDLARS, SMART

Information Systems and Programs

Unit –I Information System : Basics
-Information System: Basic types, characteristics and components.
-Information Organisation as a System: Libraries, Documentation and Information
Centres, Information analysis Centres, Referral Centres, Translation Centres,
Reprographic Centres.
        Planning and Design of National Information System, National Information Policy,
-National Information Systems (objectives, functions, services, products): NISCAIR,
DESIDOC, NASSDOC, SENDOC, NDCMC, ENVIS, NCSI, NIC, BARC.
-International Information System: MEDLARS, AGRIS, INIS, INSPEC, DEVSIS, UNISIST
Unit-II Library and Information Network
-Library Network, objectives, structure and functions.
-National Network: INFLIBNET, DELNET, NICNET.
-International Networks: INTERNET, OCLC, RLIN
-Library Consortia: INDEST, FORSA, INFONET, CSIR E-Journals Consortium
Unit-III Information Users and Information needs.
-Categories of information user.
-Information: Definition and models.
-Information seeking behaviour.
-User studies: methods, techniques and evaluation.
-Role of information systems and networks in technology transfer and national
Development.

Knowledge Organisation and Information Processing: Advanced Cataloguing Practice

Unit-1
        Manuscripts
        Cartographic materials
        Sound recording
Unit-2
        Motion picture & video recording
        Electronic Resources
        Three- Dimensional Artefacts and Realia
Unit-3
        Serials (According to AACR2 and CCC)

Indexing Language and Bibliographic Description

Unit-I Subject Analysis and Representation
-Subject Analysis: Definition and scope
-Problems of alphabetical subject representation
-Contribution of C.A. Cutter, J. Kaiser, S.R. Ranganathan, J.E.L. Farradane and Eric J.Coates
Unit-II Controlled Vocabulary.
-Definition and characteristics of indexing language.
-Vocabulary control and devices
-Thesaurus: Structure and Construction.

Unit-III Bibliographic Description and Data exchange Protocols
.
-Current trends in standardization in description and exchange:
MARC, UNIMARC, ISO2709, CCF.
-Bibliographic description: Z39.50 protocols
    OAI-PMH

Electronic Information Resources

Unit -1: Introduction
    Electronic Information resources: Meaning, need and advantage over print media
    Types: E-Journals, e-Books, e-Theses, e-newspapers, Blogs, Wikis, Portals.
    Virtual Libraries and Digital Libraries
    Study of the features and functionality of following electronic resources:
Dictionary.com, Encyclopedia Britannica, Wikipedia, ACM digital Library, IEEE / IEE
Electronic Library Online (IEL), PLOS
Unit -2: Databases, websites and repositories
    E-databases: Free and subscribed databases; bibliographical and full text databases,
    Portals and Subject gateways
    Study of the features and functionality of following electronic resources:
Emerald, EBSCO, PsycINFO, Elsevier Science, PubMed Central, J-Gate, J-Store, SCOPUS,
Web of Science, SciFinder Scholar
Unit -3: LIS e-resources
    Institutional Repositories and Open Archives
    Electronic Resources in Library and Information Science
    Study of the features and functionality of following electronic resources:
ROAR and DOAR, LISA, LISTA, LIS LINKS, ALIS, SRELS Jr. of Inf. Management, ALA,
ILA

INFORMATION TECHNOLOGY APPLICATIONS
TO LIBRARY AND INFORMATION CENTRES

Unit – I : Information Technology: Basics
    Information Technology: Definition, scope and objectives
    Historical development of IT
    Facets of IT
    Application of IT in Libraries
    Trends in IT
Unit – II : Electronic Media and Publishing
    Electronic Media: Magnetic tapes, CD-ROM, Multimedia and WWW
    Products of E-publishing: e-Books, e-Journals, e-Databases
    Benefits and Shortcomings of e-publishing
    Preservation and conservation of electronic media
Unit – III : Networking and Internet
    OSI model
    Switching system
    Internet : Definition, genesis, growth and development, connectivity

Internet resources and services
Internet protocols and standards
Web design : Introduction, Salient features of SGML, HTML, DHTML,
XML
Internet Security

RESEARCH METHODOLOGY

Unit – I: Research Methods: Basics
Research:, meaning, need and purpose
Types of research: Pure, Applied, Individual and Collaborative research,
Inter disciplinary and multi-disciplinary research
Methods of research: Descriptive, comparative, historical, case study,
experimental, scientific
Spiral of scientific method
Unit – II: Planning and Design
Research Design, and purpose, attributes, components
Research problem: Its identification and formulation, types and components
Hypothesis, usefulness, quality, types and formulation
Literature search and its use: Print, non-print, electronic sources
Synopsism and essential components
Methods of data collection: Questionnaire, Interview, Observation
Sampling techniques
Unit – III: Research Report Writing
Report writing: Structure, style, controls
Guidelines for research reporting
Style manual idea and utility

KNOWLEDGE ORGANIZATION AND
INFORMATION PROCESSING: ADVANCED CLASSIFICATION
PRACTICE

Unit-1
Classification of subject titles by CC and simple subject titles by UDC
Unit-2
Classification of titles by CC (6th Rev. Ed.) and all types of subject titles by UDC
(Abridged/Medium Ed.).
Unit-3
Classification of simple, compound and complex titles by CC (6th Rev. Ed.) and all types of
subject titles by UDC (Abridged/Medium Ed.).

STATISTICAL TECHNIQUES AND BIBLIOMETRICS

Unit – I : Bibliometrics
      Bibliometrics: Definition, facets, usefulness in research
      Bibliometric parameters
      Bibliometric laws: Bradford's Law of Scattering, Ziff's Law, Lotka's Law
Unit – II : Data Analysis and Citation Analysis
      Statistical Analysis and Interpretation of Data: Frequency distribution,
Measures of central tendency: Mean, Mode and Median
      Regression Analysis and Correlation Coefficients
      Content Analysis
      Citation Analysis
      Presentation of data: Tables, Charts, Graphs
Unit – III : Bibliometrics and related study
      Libra metrics, Scientometrics, Informatics, Cybermetrics, Webometrics

DIGITAL LIBRARY

Digital Library (DL)
Unit 1. Introduction
      genesis, definition, objectives, scope, components, soft wares for digital library
      digitization – devices (scanners, cameras)software, process
      data warehousing, data mining
      Metadata- history, nature, standards
      Virtual library
Unit 2. Digital collections & évaluations
      e-documents – nature, acquisition of E-Books, E-Journals, E-zine, E-Reference Sources,
Digital
Documents (Born and legacy documents)
      databases – types (bibliographic, full-text) –nature,
      Evaluation
Unit- 3. Open access movement & DL case studies
-Open Access Movement and Institutional repositories.
      Case study of select digital Libraries- California Digital Library; Alexandria Digital Library;
ArXive; Cogprintis; Vidyanidhi

ORGANISATION AND MANAGEMENT OF PUBLIC LIBRARY SYSTEM

Unit –I : Basic thoughts
      Public library system: Definition, types and their functions
      Role of libraries in public institutions
      Role of RRRLF in the development of public libraries.
      Human Resource Management
Unit – II : Financial Management and Environmental Management
      Budgeting: Types or methods
      Library Building Planning: Its Concept, elements and types.
      Furniture fitting and equipment: Standard and specifications.

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Unit – III : Collection Development and User Services

    Collection development principles, policy and tools
    User services : Types
    Marketing of information Services and Products: Strategies
    Maintenance: Weeding, Stock Verification, Preservation of Library Materials

ORGANISATION AND MANAGEMENT OF ACADEMIC LIBRARY SYSTEM

Unit –I : Basic thoughts

    Academic library system: Definition, types and their functions
    Role of libraries in academic institutions
    Role of UGC in the development of college and university libraries.
    Human Resource Management

Unit – II : Financial Management and Environmental Management

    Budgeting : Types or methods
    Library Building Planning: Its, elements and types.
    Furniture fitting and equipment: Standard and specifications.
-
Unit – III : Collection Development and User Services

    Collection development principles, policy and tools
    User services : Types
    Marketing of information Services and Products: Strategies
    Maintenance: Weeding, Stock Verification, Preservation of Library Materials

ORGANISATION AND MANAGEMENT OF RESEARCH AND TECHNICAL LIBRARY SYSTEM

Unit –I : Basic thoughts

    Research and Technical Library system: Definition, types and their functions
    Role of libraries in Research and Technical institutions
    Agencies and their Role in the promotion and development of Research and
Technical Libraries
    Human Resource Management

Unit – II : Financial Management and Environmental Management

    Budgeting : Types or methods
    Library Building Planning: elements and types.
    Furniture fitting and equipment: Standard and specifications.

Unit – III : Collection Development and User Services

    Collection development principles, policy and tools
    User services : Types
    Marketing of information Services and Products: Strategies
    Maintenance: Weeding, Stock Verification, Preservation of Library Materials

SYSTEM ANALYSIS AND DESIGN

UNIT – I : System Approach
System : Definitions, characteristics, components
System approach to a Library

UNIT – II : System Development Life Cycle
Approaches to system development
System development life-cycle phases
Roles involved in SDLC
System Development Tools (Flow chart, data flow diagrams, decision tables, Decision Tree)
System Development Process (System Analysis And System Design)

UNIT – III : System Management
Management Information System (MIS)
Project management: PERT/CPM
System evaluation: SWOT (Strength Weakness Opportunities Threat)
Total Quality Management (TQM): Definition, and elements
Information Reengineering

B.Lib.I.Sc:

Foundations of Library and Information Science

Unit-I Libraries : Modern, Role and Types
Social and historical foundation of a library: Library as a social institution
Classification of libraries, their distinguishing features and functions: Public Library, Academic Library, Special Library
Role of library in formal and informal education
Five Laws of Library Science and their implication in library and information activities.

Unit-II Library and Information Profession
Attributes of a profession
Librarianships as a profession
Professional Ethics, Professionalism
Professional Associations and their role in the development of profession.
Study of selected international and national associations and organizations: their aims, objectives and activities (ILA, IASLIC, IFLA, ASLIB, LA, ALA).

Unit-III Development of Libraries and Library Movement
A brief sketch of library movement with special reference to India since 1900. Present library situation in M.P.
Resource sharing and library networking: Definition, and area of Resource sharing.
Library Legislation: purpose and essential features.
Library Legislation in India with State Library Acts.

Knowledge Organisation and Information Processing: Classification Theory

Unit-I: Library Classification : Basic
Definition, need, purpose and function

Knowledge classification and Book Classification: , features
Species of schemes of classification: Enumerative Vs Faceted/ Analytico- Synthetic Classification
Subjects and Isolates: Types and characteristics
Study of DDC and CC: Salient features, arrangement of Main Classes, study of tables and relative index

Unit-II: Theory of Library Classification

Classification Theory: , importance and types
Canons, Principles of Helpful Sequence and Facet Sequencen of Call Number, Class Number, Book Number, Collection Number and their functions
of Categories
Notational systems: Types, characteristics, qualities and functions

Unit-III: Facet Analysis and Devices

Facet analysis: Definition and
Phase relation
Devices in classification
of Sector and Zone in notation
Systems and Specials

Information Technology: Basics

Unit-I Introduction to computer

Definition, , characteristics.
Historical background: generation of computers.
Types of computers.
Basic units of a computer.
Memory and its types-Primary and Secondary.
Input/Output devices.

Unit-II Software Components

Types of Software: application and system software.
Operating system: DOS and WINDOWS.
Programming language: Introduction.
Introduction to Multimedia
Definition, types of networks: LAN, WAN, MAN.
Networking: and topologies.

Unit-III Networking and Digital Library

areas of automation
Library Automation Software: Stand-alone and Integrated
Automation of in-house operation: Acquisition, Cataloguing, Circulation, Serial Control, OPAC and Library Statistics
Salient features of SOUL and CDS/ISIS.
Digital Libraries: Introduction

Knowledge Organisation and Information Processing: Classification Practice

Unit-1

Steps in classifying a document.
Classification of Simple Titles by Colon Classification (6th Rev. Ed.) and Dewey decimal classification (19th edition) Scheme.

Unit-2

Classification of Compound Titles by Colon Classification (6th Rev. Ed.) and Dewey Decimal Classification (19th edition) Scheme.

Unit-3

Classification of Simple, Compound and Complex Titles by Colon Classification (6th Rev. Ed.) and all types of subject titles by Dewey Decimal Classification (19th edition) Scheme.

Information and Communication

Unit-I Information Communication
Data, Information and Knowledge: Conceptual difference
Information: Characteristics, nature, value and use
Communication of Information: Information generation and diffusion
Communication channels and models
Barriers to Information flow.
Trends in Scientific Communication

Unit-II Library, Information and Society
Information Science: Definition, scope and objectives
Information Society: Genesis and characteristics
Information Policy
Right to information.
Press and Registration Act
Intellectual Property Rights

Unit-III Public Relations and Extension Activities
Definition, facets and programs
Publicity and extension, outreach activities.
Library path finder (Guides)
Consultancy including Promotional Web Tools.
Changing role of Library and Information Centres in Society

Knowledge Organisation and Information Processing: Cataloguing Theory

UnitI Nature of Library Catalogue:
Definition, , and purpose of Library catalogue.
Difference between catalogue and bibliography, MARC, Meta data, Dublin core
Form of catalogue (physical forms including OPAC and inner forms)
Document Description: Types of entries in CCC and AACR2, rules for filing.
Canons of cataloguing.

UnitII Cataloguing Dimensions
Subject Cataloguing: subject headings, descriptors, choice of terms, subject heading lists e.g. LCSH and SLSH.
Centralized, Cooperative Cataloguing, Union Catalogue
Prenatal cataloguing, Cataloguing in Publication Data.(CIP)
Descriptive and Selective Cataloguing.

UnitIII Trends in Cataloguing
Study of the rules of the choice and rendering of author headings in the

AngloAmerican Cataloguing Rules 2nd rev. ed., and CCC
Choice and rendering of Indic Names in AACR2
Problems of Non Book materials
Trends in cataloguing and standards in cataloguing

Management of Library and Information Centres

Unit –I Management
definition, difference between management and administration
Principles of Scientific Management :
Elements of Management Process POSDCORB.
Library organizational structure.
Library authority and Library committee.
Management Information System (MIS)
Unit II Financial, collection management library routines and work flow
Financial management (Sources of finance, Budgeting:, methods and techniques)
Sections of the library and their work flow: Acquisition, Technical, Circulation, Periodical,
Maintenance (Shelving, Stock Verification, Binding, Preservation, Weeding and withdrawal
of documents) Administration and Accounts Section
Collection management: Policy of book selection in Public, Academic and Special
libraries.
Tools and sources of book selection.
Preparation and maintenance of library records: Accession Register, Shelf List Cards,
Book
Selection Cards, Organizational Charts.
Library Statistics and Annual Reports.
UnitIII HRM and Physical planning of libraries
Human Resource Management: Staff recruitment selection and training, development,
motivation and quality improvement, Staff formula Job analysis and Job description.
Physical Planning and Library Building : Its, principles and types.
Furniture fitting and equipments: Standard and specifications.

Information Services

UnitI Information Services: Indexing and Reprographic Service
Information Service: Meaning, purpose and importance
Index and indexing: Meaning, characteristics, purpose and function.
Types of indexing: Precoordinate and Post coordinate indexing.
Chain Indexing, PRECIS, POPSI, UNITERM Indexing
Keyword Indexing: KWIC, KWOC, KWAC, KWWC.
Reprographic services: Meaning and utility.
UnitII Information Services: Alerting , Abstracting,and Translation Service
Alerting Service: Meaning , purpose and importance CAS and SDI
Abstract and Abstracting: Meaning and characteristics. Types of Abstract: Indicative,
Informative, Slanted, Critical, Graphic, Numerical and Telegraphic. Qualities of Abstract,
essential elements and format.
Translation services:, types and utility
UnitIII Reference Service and Documentation:
Reference service:, definition and trends.
Initiation of new library user.

Reference Interview
Ready reference service
Long range reference service.
Documentation: Meaning, genesis, scope, purpose and function.
Facets of documentation: Documentation work and Documentation service
Documentation List: Its kind and preparation.
Use of IT and Multimedia in Information Services

Knowledge Organisation and Information Processing: Cataloguing Practice

Cataloguing of books according to AACR2(1988) and CCC 5$_{th}$ ed.
Unit I
  Personal author
  Pseudonymous Author
Unit II
  Anonymous Book
  Corporate Bodies
Unit III
  Multivolume Books
  Composite Books

Doctor of Philosophy (PhD)

Research Methodology in Library and Information Science

Unit-1: **Research Domain (12 hrs.)**
Introduction to Research Methodology
Philosophical foundation of Library and information Science Research
Research Problem and Research Design
Identification and formulation of problem, Formulation of Hypotheses

Unit-2: Research Methods in LIS and Research Metrics (12 hrs.)
Types of Research Methods: Quantitative and Qualitative
Research Techniques and Tools: Questionnaire, Interview, Observation, Schedule, Check-list,.
Research Sampling Techniques
Metric Studies in LIS: Bibliometrics, Scientometrics, Informetrics, Webometrics, Altmetrics and Citation analysis.

Unit-3: Data Analysis and Interpretation (12 hrs.)
Techniques for analyzing data
Qualitative content analysis

Interpretation and Presentation of Results: Table, Charts and Graphs
Unit-4: **Current Research Trends and Ethics (12 hrs.)**
Current Research Trends in Library & Information Science
Research Ethics and Integrity

Unit-5 : Research Report Writing (12 hrs.)

Research Report, Structure, style, Writing

Guidelines for research reporting (Style manuals – Chicago, MLA, APA, etc.

Citation styles: Footnotes, References including Bibliographic description.

Information Communication & ICT Applications

Unit-1: Information Communication (12 hrs.)

 types, generation,

Channels, Process and Barriers

Communication models

Communication skills

Unit -2: ICT -Overview (12 hrs.)

Web Technology & Interactive Digital Resources: Nature, Features and Types;

Internet and Web Technology including Library Service Web Tools (Generations starting with 2.0), Information Mashup, Social Network etc., LIS Discussion Forums and Mailing Lists (ListServs)

OAI and Metadata harvesting, Data mining and data warehousing, Standards - Z39.50, RDA, Dublin Core

Unit -3: ICT Applications (12 hrs.)

Overview: Web Browsers, Search Engines

Selected Research Application Soft wares including spreadsheets and graphing tools for data handling and analysis.

Unit -4: On-line Search and Retrieval (12 hrs.)

Subject Analysis and Content Analysis

Search Techniques

Search Strategy

Unit -5: Research Reporting (12 hrs.)

Technical writing: methods for preparation and reporting

Research Report: Format, preparation

Electronic content creation and dissemination.

Research and Publication Ethics (RPE)

RPE 01: PHILOSOPHY AND ETHICS (4hrs.)

Introduction to philosophy : definition , nature and scope, branches

Ethics: definition, moral philosophy, nature of moral judgements and reactions

RPE 02: SCIENTIFIC CONDUCT (4 hrs.)

Ethics with respect to science and research

Intellectual honesty and research integrity

Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP)

Redundant publications: duplicate and overlapping publications, salami slicing

Selective reporting and misrepresentation of data

RPE 03: PUBLICATION ETHICS (7hrs.)

Publication ethics: definition, introduction and importance

Best practices/ standards setting initiatives and guidelines: COPE, WAME, etc.

Conflicts of interest

Publication misconduct: definition, problems that lead to unethical behavior and vice versa, types

Violation of publication ethics, authorship and contributorship

Identification of publication misconduct, complaints and appeals

Predatory publishers and journals
PRACTICE
RPE 04: OPEN ACCESS PUBLISHING (4hrs.)
Open access publications and initiatives
SHERA/RoMEO online resources to check publisher copyright & self –archiving policies
Software tool to identify predatory publications developed by SPPU
Journal finder/ journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.

RPE 05: PUBLICATION MISCONDUCT (4hrs.)

Group Discussions (2hrs.)

Subject specific ethical issues, FFP, authorship
Conflicts of interest
Complaints and appeals: examples and fraud from India and abroad

Software tools (2hrs.)

Use of plagiarism software like Turnitin, Urkund and other open source software tools
RPE 06: DATABASES AND RESEARCH METRICS (7 hrs.)
Databases (4hrs.)

Indexing databases
Citation databases: Web of Science, Scopus, etc.
Research Metrics (3hrs.)
Impact Factor of journal Citation Report, SNIP,SJR, IPP, Cite Score
Metrics: h-index, g-index, i10 index, altmetrics.
Community Information and Services

Unit -1 Community Information (12 hrs.)
meaning, definition, , scope, uses
Information Literacy
Application of ICT- Radio (FM and other) TV,Computers, Mobile Technologies and others

Unit -2 Community Information System (12 hrs.)
s analysis, planning, designing
Application, execution and evaluation
Invisible colleges, Folklore, Mass media, etc.

Unit-3 Designing Web enhanced Community Information System (12 hrs.)
Discovery phase: Goals
Project Plan
Technical Brief of the Website

Unit -4. **Community Education (12 hrs.)**
Information s of Rural/ Urban community
D sign an v o m n o In orma ion Sys m or G 's
Indian Intiatives—Gyan Vahini, Akshya, Gyandoot, Setu, e-Seva, Bhoomi, etc.

Unit- 5. **Areas of Community Information Services (12 hrs.)**
Sustainability studies – funding, executing, evaluation, reporting
Selected areas: Health, Education, Employment, Agriculture, Village Industries, Utilisation of Local Resources, Transport, Daily necessities,
Government Welfare Schemes, Consumer Services, Housing, etc.

Library and Information Science Education and Research

Unit-1: **Library Science Education (12 hrs.)**
Sociology of library and information science education
Level of courses in education for librarianship and their objectives
Continuing education for Library & Information personnel
Partnership with Different Agencies (teaching departments, government bodies at
National level)

Unit-2: **Accreditation of LIS Courses (12 hrs.)**
Curriculum Design: Methodology
Role of UGC in curriculum development
Teaching techniques and evaluation of student performance

Unit-3: **Accreditation Issues (12 hrs.)**
Role of UGC
Role of NAAC

Unit-4: **Trends in Library and Information Science Education (12 hrs.)**
Research trends at national and international levels
Faculty development: Manpower planning and its impact on library and information Science Education
Development of research programme in library and information science

Unit-5: Current Research Areas in Library and Information Science (12 hrs.)
Changes in the LIS Education and Research
Content analysis of the recent Information
Electronic Commerce in LIS Education

Bibliometrics

Unit 1: Introduction to Bibliometrics (12 hrs.)

Scope and Features of Librametry

Bibliometrics, Scientometrics, Informetrics, Cybermetrics and Webometrics

Citations vs. Hyperlinks,

Altmetrics and Article-Level Metrics

Unit 2: Theories, Laws and Indicators (12 hrs.)
Bi iom ric Laws: Lo ka's Law, Bra or ;s Law, Zi 's Law; m irica Laws o ric , Garfield, Application of Bibliometric Laws in Web;

Bibliometric indicators (Journal Impact factor, h-index and its derivatives, etc.).

Webometric indicators (Web Impact Factor, WISER, etc.)

Unit 3: Citation Analysis and its Application (12 hrs.)
Journal Ranking; Age study and obsolescence;

Authorship Collaboration; Self-citation, Productivity,

Mapping of Science; Bibliographic coupling: Co-word, Co-citation coupling.

Unit- 4 : Bibliometric and Webometric Tools (12 hrs.)
Bibliometric tools – SCI, SSCI, A&HCI, SCOPUS, Google Scholar, etc;

Webometrics tools – Generic search engines and specialized tools (LexiURL, SocSciBot Internet Archive, Pajek, etc.)

Altmetrics tools (Altmetric, ImpactStory, PloS, etc.); OA movement and Informetrics.

Unit- 5: Bibliometric and Statistical Analysis (12 hrs.)
Statistical Analysis and Interpretation of Data: Frequency Distribution, Measures of Central Tendency: Mean, Median and Mode

Regression Analysis and Correlation Coefficients

Knowledge Organization and Information Processing

Unit 1: Subjects and Isolates (12 hrs.)
Types and Modes of formation of subjects

Isolates: Common and Special, Speciators

Categories – Ranganathan, Farradane, Vickery, etc; ,

Unit 2: Theory of Library Classification (12 hrs.)
General Planes of work

Normative principles – Laws, Canons,

Principles of classification by Sayers, Bliss, Richardson and Ranganathan;

Postulates; Theory of Integrative Levels;

Study of special classification schemes- Design of special classification schemes

Unit 3: Terminology and Classificatory Language (12 hrs.)
Terminology

Notational System

Mnemonics

Unit 4: Schemes of Library Classification: Comparative study (12 hrs.)
CC, DDC, UDC

Revision Policy

Unit 5: Classification and Computers: Recent Trends (12 hrs.)
Classification and Digital resource organization
Web Dewey;
Use of DDC for organization of digital resources;

Sources of Information for Research

Unit 1. Information Sources (12 hrs.)
Sources, characteristics and their types

Institutional Sources: Organizations, Research projects, etc.,

Documentary / Non- Documentary sources

Non-book materials Internet as source of information; Reference Vs Plagiarism,

Unit –2. Descriptive References Sources: Features (12 hrs.)
Dictionaries, Encyclopedias, Directories, Biographical, Geographical, Year Books and Almanacs, Current Reference Sources

Unit -3. Bibliographic Sources: Features (12 hrs.)
Bibliographies

Indexing & Abstracting sources,

Unit -4. Digital Information Sources (12 hrs.)
Electronic resources-web resources

Databases, Consortiums, Subject Gateways, Portals, Blogs, Wikis,etc.

Unit-5 Online Information and Reference Sources (12 hrs.)
Illustrative- IEEE / IEE Electronic Library Online (IEL), Emerald, EBSCO, PsycINFO, Elsevier Science, PubMed Central, J-Gate , J-Store, Web of Science, SCOPUS, SciFinder Scholar, PLOS, DOAJ, RePEc, Google Scholar), *Commercial Tools (e.g. Xrefer.com), Cross Publisher*

GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (C.G.)

Foundations of Library and Information Science
Unit-I Library as a Social Institution
Social and Historical foundation of Library
Different Types of Libraries-their distinguishing Feature and Functions.
National Libraries: features and activities, National Library of India, UK, and USA
Role of Library in Formal and Informal Education

Unit – II Normative Principals and Laws Relating to Libraries and Information.
Five Laws of Library Science and their Implication
Library Legislations- and essential features.
 Library Legislation in India.
Feature of Chhattisgarh Public Library act (2008)
 Press and Registration act and Delivery of Books (Public Library) act.
 Copyright act
Unit-III Library Development
 Development of Libraries with special reference to India.
Organization and Institutions involved in the development of Library and Information
Services.
Commission-Committees Reports in Library Development with special reference to India
Unit- IV Resource Sharing, Library Networks and Extension Activities
Resource Sharing: and Methods.
Library and Information Networks and Consortia's. and purpose
 National and International Library and Information Networks and Consortia's
Publicity and Extension Services
Unit- V Library and Information Profession
 Librarianship as a Profession.
 Professional Ethics
 Professional associations and their role.
 Professional ,National and International associations

Knowledge Organization - Classification (Theory)
Unit-I Universe of Knowledge
 Structure and attributes
 Modes of formation of subjects
 Different types of subjects
 Universe of subjects as mapped in different schemes of classification
Unit-II Theory of Library Classification
 Definition:, Purpose and Functions of Library Classification.
 General Theory of Library Classification
 Mapping of Subjects in different schemes of Classification (DDC, UDC, CC)
Unit- III Postulates and Approach to Classification
 Postulation and their usefulness in classification of fundamental categories;
 Facet analysis, facet sequence;
 Phase Relations-different types;
 Common isolates.
Unit –IV Notational System
 Notation-, functions, and types;
 Hospitality in array &Chain;
 Devices;
 Call number and its structure.
Unit- V Study of selected scheme of classification
 General V/S Special Classification ;
 Dewey Decimal classification;
 Universal decimal classification;
 Colon classification.

Knowledge Organization - Cataloguing (Theory)
Unit– I Bibliographical Description

Catalogue –purpose, structure and types, physical forms including OPAC rules.
Normative Principles of Cataloguing
Overview of principles and practice in document description.
Standard cods of cataloguing.
Unit– II Format of catalogue entry
Kinds of entries
Data elements in different types of entries
Filing of entries-classification and Alphabetization.
Centralized and Co-operative Cataloguing, Union Catalogue
Unit–III Choice and Rendering of Headings, Subject Headings
Personal Names– Western &Indian, Corporate Authors, Pseudonyms, Anonymous
Works, Uniform Titles
Salient Features of CCC &AACR-II: Comparative Analysis
Subject Heading Lists: LCSH and SLSH
Unit–IV Subject Indexing
Subject Cataloguing-Purpose problems.
Chain procedure; Sears List, LC, PRECIS, POPSI.
Unit–IV Subject Indexing
Cataloguing of Non-book Materials
OPAC, WEBOPAC

Computer Basic for Libraries (Theory)
Unit- I Fundamentals of Computers
Computer -Definition, , Scope and Objectives
Historical Development of Computers, Generation of computers, classification of
Computers.
Computer Devices: Input and output
Computer-Impact on Libraries and Society
Unit- II Computer Architecture
Computer Hardware
Computer Software: Type and Use
Languages: Machine Level Language, Assembly Level Language, and High Level Language
Storage Devices: Permanent Drive, Flash Drive, Cache, USB, and DVD
Features of Indian Library Automation Software packages
Unit- III Communication Technology: Tools& Techniques
Telecommunication Technology: Media, Mode and components
Networking Media, Optical Fiber, Ethernet, Wireless Device, Bluetooth, Hubs, Router and
modem
Types of Network: LAN, WAN, MAN
Network Topologies: Bus, Star, Ring, etc.
Multiplexing &Modulation: & Types
Unit-IV Information Systems and Networks
Library and Information Networks: DELNET, INFLIBNET, CALIBNET etc.
CSIR E-Journals Consortium, UGC-INFONET Digital Library Consortium
Internet: Web Browser, Web Tools, Search Engines, Web2.0, Web3.0, Web Directories,
Subject Gateways, library Portals, etc. Intranet and Extranet
Effect and Side-effect of Internet, Internet Security

Knowledge Organization: Classification and Cataloguing (Practice)
Unit-I Classification of Documents (using latest available edition of DDC)
Classification of documents representing simple subject

Classification of document having common isolates
Classification of documents representing compound subject
Classification of documents representing complex Subject
Unite-II Assignment of Book Number
(Using at Least One Standard Book Numbering System)
Unit- II Cataloguing of Documents (Using at least one standard cataloguing code.)
cataloguing of simple documents
Cataloguing of complex documents
Unit- III Subject Cataloguing
Assigning Subject Headings using at least one: standard subject headings

Discipline Specific Elective – DSE1
School Librarianship
Unit – I School Library: An Overview
School Library: Importance, Purpose and Functions
Setting up and running a School Library
Role of School Library in Education
School Library as a Learning Centre
Unit – II Development of School Library
Five Laws of Library Science: Implications in School Library
Role of various Committees/Organization in Promoting School Libraries
Library Automation: feature of e-Gyankosh
Library Rules
Unit – III Collection Developments in School Library
School Library: Types of Collections
Collection Development Policy
Local Library Committee: Its Role in Collection Development
Stock Maintenance: Preservation, Verification and Weeding Policy
Unit – IV School Library Services
Developing Reading Habits: Scanning, Skimming, Extensive and Intensive reading
Newspaper Reading, Clipping and Collage
Extension Activities in School Library
Information Literacy
Unit – V Library Management
Library Classification and Cataloging
Financial Management of School Libraries
File and Registered Management in School Library
Library Orientation

Public Librarianship
Unit-1 Public Library
Public Library: Meaning Importance, Objective and Function ;
UNESCO Public Libraries Manifesto: 1972,1994 and 2004;
History and Development of Public Library in India and UK.
Unit- II Resource Development
Financial Resources of Public Library ;
Collection Development Policies in Public Library;
Human Resources: Nature, Size, Selection and Recruitment.
Unit– III: Management and Organization
Organizational Structure of Public Library ;

Planning and Administration;
Technical Processing;
Element in the Design of Public Library Building.
Unit- IV Public Library Services
Types of Public Library Services;
Application of ICT in Public Library Services.
Unit- V Outreach Activities
Extension and Public Activities of Public Library;
Role of Public Libraries in Formal and Information Education.

Special Librarianship
Unit-1Special Library
Special Library : Characteristics and Functions;
History and Development of Special Library;
Changing Landscape of Information and Transformation of Special Libraries;
Changing Role of Library Professionals in the Emerging Information Scenario in Special Library.
Unit- II Resource Development
Library Authority, Leadership and Decision Making Mechanisms;
Collection Development Policies in Special Library;
Preservation management and weeding out collections.
Circulation Management and Control.
Unit– III: Management and Organization
Planning and internal organization of building;
Planning and acquisition of equipment ;
Technical Processing;
Management of Technical Services.
Unit- IV Public Library Services
Types of Special Library Services;
Application of ICT in Special Library Services.
Unit- V Outreach Activities
Extension and Special Activities of Special Library;
Automation of special library operations and services.

Library Management
Unit-1 Fundamentals of Management
definition and scope
Principles and Elements of Management
Function and Principles of Scientific Management
Management school of Thoughts
Total Quality Management (TQM)
Unit- II Resource Development
Types of Information Resources, Selection Principles Including Communication Media
Different Types of Selection Tools and Their Importance
Human Resource Development : and Contours/ Structures
Personnel Planning
Unit– III: Maintenance of Library
Acquisition Procedures: Books and Non-Book Material
Acquisition of Periodicals and Serials
Technical Processing
Circulation Work
Maintenance, Shelving, Stock Verification and Binding Etc.

Unit- IV Budgeting & Reporting
 Library Finance, Accounting: & Types
 Library Budgets
 Annual Report
Library Statistics
Unit- V Planning
, definition, and purpose
 Library Committee : Function and Power
 Library rules and regulation
Library building

Information Sources &Services (Theory)
Unit- I Reference and Information sources
 Sources of Information:, Nature & Characteristics
 Documentary Source of Information: Category and Types
 Non Documentary Sources of Information, Digital Sources
 Evaluation of Reference and Information sources
 Reference Service:, Definition and Types
UNIT- II: Sources of Information
 Evolution of Information Sources: Print & Non-print
Primary Information Sources: General introduction, Characteristics & examples
 Secondary Information Sources: General Introduction Characteristics & examples
 Tertiary Information Sources: General Introduction Characteristics & examples
UNIT- III: Types of Information Services
Information Services:, Definition, s and Trends.
Documentation Services: Abstracting and Indexing Services
 Alerting Services, CAS, SDI, Reprographic Service, Translation Service, Document
Delivery and Referral Service
Unit- IV Information Systems and Services
 Global -UNISIST, UNESCO-PGI, AGRIS, MEDLARS, INIS, etc
National-NISCARE (INSDOC), NASSDOC, DESIDOC, NISSAT,
INFLIBNET, NICNET, ERNET, DELNET, CALIBNET, etc.
Unit– V Information Sources& Services on Web
 Web Resources: and Use
 Types of Web Resources :E-journals, E-books, E-Theses,
 E-resources in Science and Technology, Social Science and Humanities
 Role of Reference Librarian and Information Officer in Electronic Environment

Library and users
Unit– 1 User and their Information Needs
 Categories of Information Users
 Information: Definition and models
 Assessment of Information s of Different User Groups
Unit– 2 Information Seeking Behaviors
 Theories of Behaviors Studies
 s and Methods of Information Seeking Behaviors
 Models of Information Seeking Behaviors
 Information Searching Strategy and Principles
Unit – 3 User Educations
 Concepts, Definition and s
Methods of User Education
 Recent trends in User Educations
Unit- 4 User Studies

Types and Scope of user Studies
Evaluation of User Studies: Methods, Steps and Benefits
Methodology of User Studies

Unit – 5 Recent trends and Developments
Online Information Seeking Behaviors
Information needs of Persons with Disabilities
Techniques of Library and information Centers Survey
Information Literacy: Definition, Objectives and importance

Computer Basic for Libraries (Practice)
Unit- I Operating Systems
Commands of MS-DOS
Windows: Installation and Backup
UNIX/ Linux: Basic Commands
Unit- II Text Processing Software
Handling Text Data: MSWORD
Handling Numeric Data: MSEXCEL
Preparation of Presentation through Power Point
DTP Software
Unit-III DBMS Software
WINISIS
Database Management Software
Unit- IV Database Search and Retrieval
Offline Database
Online Database
Unit-V Online search
Use of Internet
How to Search on Web, Syntax and Semantic

Information Sources and Services (Practice)

Suggested List of Reference/Information sources for Evaluation and Information Queries
Encyclopedias
New Encyclopaedia Britannica
Encyclopaedia Americana
International Encyclopaediaof Social
Sciences
McGraw Hill Encyclopaedia of Science and
Technology, Encyclopaedia of Library and Information
Science
(B)Dictionaries
Webster's Third New International
Dictionary of English Language
The Oxford English Dictionary
Funk and Wagnall Dictionary
(C)Year Books and Almanacs
Statement's Year Book
Europe Year Book
India: A Reference Annual
Manorma Year Book
World Almanac and Book of Facts
(D)Directories
l. World of Learning

2. University Handbook
       Directory of Scientific Research
Institutions in India
(E)Biographical Sources
International Who's who
India's who's who
Directory of National Biography
(F)Geographical Sources
l. Chamber's World Gazetteers and
Geographical Dictionary
2. Webster's Geographical Dictionary
Gazetteer of India: India Union
Fodor's India/India Handbook
Britannica Atlas
(G)Serial Reference Sources
Ulrich's International periodical
Directory
Keeping's Record of World Events
Asian news digest
Index India
Guide to Indian Periodical Literature
(**H)Bibliographies**
l. Indian National Bibliography
2. British National Bibliography
3. National Bibliography of Indian
Literature
       Cumulative Book Index
S. Books in Print
      Indian. Books in Print
      Hindi Sources
l. Hindi Vishwakosh
2. Bhartiy Kahavat Sangrah

Ability Enhancement Compulsory Course - AECC1
Communication Skill
Unit– 1 Communication Fundamentals
 Your Profile
 Introducing the Institution
 The Basics
Social Skills
Unit– 2 Preparing for Job Interview
 The Job Interview
 preparing your resume / Curriculum vitae
 Preparing Your Portfolio
 Your Profile
Unit–3 Workplace Skill
 Body Language
 Group Discussions
 Telephone Skills
 Presentation Skills

Statistics for Librarianship

Unit– 1 Methods of Data Collection
 Data Collection Techniques: Primary and Secondary Data
 DataCollectionTools:Questionnaires,Schedule,Interview,ObservationScales And Check Lists,
Library Records and Reports
 Sampling Techniques
Unit– 2 Data Analysis and Interpretation
 Descriptive Statistics: Measures of Control Tendency; Mean ,Median and Mode
 Tabulation and Generalization
 Measures of dispersion
 Graphical Presentation of Data-Bar, Pie, Line Graphs, Histograms
Unit– 3 Report Preparation
 Research Reporting: Structure, Style, Contents; Style Manuals-Chicago, MLA, APA etc.
 Current Trends in LIS Research
 Codes and Standards
 Selective and Simplified Cataloguing
Unit– 4 Measuring Techniques for Library Data
 Statistical Librarianship Librametrics, Bibliometrics, Scietometrics , Informetrics.
 Bibliometrics Analysis, and Laws of Bibliometrics
 Webometrics : Definition and Use

Digital Library: Fundamentals
Unit– I Digital Libraries
 Digital Libraries : and definition ;
 Historical development of Digital Libraries ;
 Copyright and license issues.

Unit– 2 Digitization Process
 Software, hardware and best practices;
 Scanners and scanner types;
 OCR and OCR software.

Unit– 3 ICT Application for DLs
 Open source software;
 Dspace, GSDL : Features and comparative study of Dspace, Eprints and Fedora;
 Open Standards and File formats, harvesting metadata.

Unit– 4 Digital Library Architecture
 Grid architecture. Open URL integration.
 Digital Preservation : Persistent identifiers : DOI and CNRI Handles;
 Multilingual digital repositories and Cross-language information retrieval

Generic Elective – GE3
Collection Development
Unit- 1Basics of Collection Development
 Definition, and Function
 Collection Development Policy
 Collection Development Vs Collection Management
Unit- 2Types of Collection
 Collection: Importance of collection in library
 Conventional Documents
 Audio-visual Materials
 Electronic Materials
Unit- 3Document Selections and Acquisition Procedure

Acquisition Programme: Objectives and Functions
Material selection: Principles and Selection Aids
Allocation of Library Funds: Norms and Standards
Problems in Acquisition of reading Materials
Good Office Committee

Unit- 4CollectionEvaluations and Weeding
Collection Evaluation: Definition, , and Utility
Techniques/Methods of collection evaluation
Weeding: and Safeguards
Electronic Publication and its collection
Role of document backup Services in Collection Development

Unit- 5Preservation, Its Impact on Collection Development
Preservation:, Areas, Limitations and Safeguards
Preservations: Methods and Remedies
Impact of IT on Collection Development

MASTER OF LIBRARY AND INFORMATION SCIENCE

Information and Communication

Unit- 1 Data, Information and Knowledge
Information: characteristics, nature, value and use of information

ual difference between Data, Information and Knowledge & Wisdom
Communication of Information: information generation
Communication channels, modes and barriers

Unit- 2 Information Society
Information Society: Genesis, characteristics and Implications
Social implication of information
Policies Programme Related to Information.
Information Industries.
 of Freedom, Censorship, Fair Use. Creative Commons, copyright in IPR.

Unit- 3 Information Science
Information Science: Definition, Scope, objectives
Information Science as a Discipline & its relationship with other subjects
Information Communication: Theories & Models

Unit-4 Economics of information
Information as an Economic Resource
E- Commerce and E-Governance
Marketing of Information.

Unit- 5 Information & Knowledge Management
Information Management
Knowledge Management
Information Society Vs Knowledge Society

Information Technology: Application (Theory)
Unit-1 Library Automation
Library Automation: Definition, , Purpose and Advantages
Planning and Implementation of Library Automation.
Housekeeping Operation of Library.
Evaluation of Library Automation Software

Unit- 2 Internet Basics Features and Tools
Internet: Definition, application and Tools

Internet Connectivity: Dialup, Leased Line, ISDN, Digital Subscriber Line
(DSL) E-mail and Send mail, POP3.
Internet Protocol: TCP/IP, FTP, HTTP, SMTP, Z39.50, and Z39.85
OSI Network Model and TCP/IP Reference Model
Network Based Information Services.

Unit-3 Web Page Designing &Content Management
Hypertext and Hyperlink, Hypermedia
Basic Code of HTML5.
Web Based Content Development.
Content Development software: JOOMALA /Word Press etc

Unit- 4 Open Access to Scholarly Communication
Scholarly Communication: and Meaning
Open Access: Overview, Definitions. Open access publishing (full, hybrids, library as
publisher, OA policies)
People, Organizations (PLOS, SPRAC ,Budapest Open Access Initiative), and resources
of Open Access
Open Source Software :Identification ,Types and Use,

Unit- 5 Digital Libraries
Genesis ,Definition, Objectives ,Scope of Digital Libraries
Study of digital Library Software: Greenstone, D-Space
File Forma t:Text, Audio, Video and Image
Software and Hardware for Digital libraries: OCR, Image editing
software,
Input Capture Devices: Scanners, Digital Movie Cameras

Information Retrieval (Theory)
Unit- Information Storage and Retrieval Systems
Objectives, Functions and component of ISAR system
ISAR System: Operation Design
Compatibility of ISAR System
Evaluation of ISAR System
IR Models

Unit- 2 Subjects Indexing: Principle and practices
Indexing:, Theories and Methods, Historical Development
Pre coordinate Indexing system, Citation Indexing
Post coordinates Indexing System- Keyword, Uniterm etc.
Trends in Automatic Indexing

Unit– 3 Vocabulary Control & Indexing Language
Indexing Language: Type and Characteristics, Common Command Languages
Vocabulary Control: Tools, and Scope
Thesaurus: Structure, Function and Construction

Unit- 4 Searching Technique and Information Retrieval
Man and Machine Retrieval System
Search Strategies: Boolean Operations, Proximity Search, Heuristic Search, Navigational
Search etc., Federated Search and Multimedia Databases Search
Data Mining, Data Harvesting,: Dublin Core, OAI/PMH, Semantic Web

Unit- 5 Advanced IR Techniques
Cross-language retrieval
Image retrieval
Multimedia retrieval
Information seeking behavior models

Information Retrieval (Practice)

Unit – 1 Preparation of Class Number for Micro-Document using UDC.
Unit – 2 Preparation of cataloguing entries for Complex Continuing Resources and Non- book Materials.
Unit – 3 Indexing Practice using PRECIS and KWIC.

Core Course – C5

Preservation and Conservation of Library Materials

TM 100 (Internal Assessment 30 + Practice 70) (Credit 4)

Unit 1 Library Materials: Preservation and Conservation
 Preservation and Conservation
 Evolution of Writing Materials
Palm leaves and Birch Bark: Their Nature and Preservation
Manuscripts, books, Periodicals, Newspapers, Pamphlets etc
 Non-Book Materials

Unit 2 Hazards to Library Materials and Control Measures
 Environmental Factors
Biological Factors
 Chemical Factors
 Disaster Management

Unit 3 Binding
 Different Types of Binding for Library Documents
 Binding Materials
 Binding Process
 Standards for Library Binding

Unit 4 Restoration and Reformatting
 Material Repair
 Microfilming and Digitization
 Preservation of digital documents

Higher education information system: Library prospective

Unit– 1 Higher Education: Retrospective and prospective
 and aims of higher education ;
 History and development of higher education system;
 Indian higher education : legacy;
 Higher education and society;

Unit– 2 Indian higher education system policy and plans
 The constitutional provisions regarding Indian higher education system;
  The evolving policy perspective in higher education;
 Various committee and commission for development of higher education.

Unit– 3 User education and theirs
 User education , definition and characteristics;
 Various types of users and their information ;
 of information seeking behavior;
 User Study:, definition and characteristics.

Unit– 4 Planning and management of higher education
 Structure and organization of higher education in India ;
 Curriculum planning for higher education ;
 Universities and its structure

Unit– 5 Resource Sharing Programmes
 Resource Sharing Services– its Objectives, Organization and Development;
 INFLIBNET and its Implications to Library Resource Sharing;
 Regional and city network of libraries and their importance.

Agricultural Information System

Unit- 1Agriculture Education and Agriculture Libraries
 Growth and development of Agriculture education and research in India
 Role of Library in Agricultural education, research and Extension
 Development of Agriculture Library in India
Unit- 2 Information Source and Services in Agriculture
 Specialized Collection and Information Sources
 Information Service and products in Agricultural Science and Technology with
Special reference to India
 Agriculture Information Centers-National and International
Unit-3Organization and Management of Resources
 General Principle of Information Management
 Information Organization, Processing and Dissemination
 Developing based and on Demand Specialized Services
Unit- 4 Information Needs
 Identifying special of Agricultural faculty& research Staff
 User Studies of Local Agriculture Libraries
Unit- 5Agriculture Information System and Networks
 Current Trends in agricultural System and Networks
 Resource Sharing and Networking in Agricultural Libraries in India
 International Agricultural Database
 Professional Associations.

Legal Information System
Unit- 1LawLibrarianship
 Growth and Development of legal Institutional in India
 Nature Principle and Characteristics of legal Information and Law Libraries
 Type of Law Library
Unit- 2 Information Source Collections
 Special Information Sources: Bills, Acts, Books, Serials, Law Court notice,
Law case amendments
 Tribunal Report, Law Digests, Legal Judgment, Delegation Legislation
 Rules and orders, Legal information Sources and Lexicons
Unit- 3Organizationsand Management of Resources
 Information Processing: Classification, Cataloguing and Indexing
 Developing special skills and Techniques to handle legal information (personnel)
 Managing finance: Funds & Fund Generation
Unit- 4 Information need and services
 Special of lawyers and legal Professionals
 Study of Law Information Centers (Local)
 Special Services, Planning and design
 Preparation of rapports on Law Libraries (Local)
 Dissemination methods and techniques
Unit- 5Legal Information System & Networks
 Legal information System: National and International
 Structure and their services
 Legal Database and Digital Libraries
 Resource and Networks of Legal Information

Industrial Information System
Unit- 1Growth and Development of Industries& Industrialization Libraries
  Industrial Growth in India
 Type of Industries: Government and Non-Government.
 Role of Libraries and Information Center in Industries

Categories of Industrial Libraries
Unit- 2 Industrial Information Resource Collections
 Tread Literature
 Patents
 Standards
 Technical Reports Bulletins
Unit- 3Organizations and Management of Industrial Information
 Special Classification Scheme and Indexing System
 Planning and Designing Specialized information services and Products
 System approach to Planning and Design and Implementation
 Managing personal Skills and Finance
Unit– 4Information and Services of Industrial Libraries
 Special Classification Schemes and Indexing System
 Case Studies and field Experience of local Industries
 Preparation of Report of an Industrial Library Survey (Local)
 Marketing of Information
 Computerized Information Service
Unit- 5 Industrial Information System and Network
 Industrial Information Centers and Networks National and International
(SENDOC)
 Structure and their services
 Industrial Databases
 Resource Sharing and Networking of Industrial Information Centers in India

Second Semester

Research Methods and Statistical Techniques
Unit- 1Research Methods
 ☐ Research: Definition, Nature, characteristics, purpose and types
 Research Methods: Historical, Descriptive, Survey and Experimental
 Hypothesis:, Sources and Types, Research Question
 Scientific Methods: Features, Spiral of Scientific Method.
Unit- 2 Research Design
 Meaning and definition of research design
 Purpose / Goals of research design
 Characteristics of a good research design
 Different types of research design
 Advantage of designing research design.
Unit -3 Research technique and tools
 Meaning, and Purpose of data collection
 Questionnaire, Interview and observation schedule
 Sampling technique and sampling error
 Scale and check list
Unit-4 Data analysis and interpretation
 Statistical Methods: , Definition and Basic steps and factors involved;
 Measures central tendency: Mean, Median and Mode;
 Measures of Dispersion: Range, Mean Deviation and Standard Deviation;
 Measure of Variability and Correlation, t-test, z-test, ANOVA.
Unit -5 Research Reporting
 Meaning definition and of research design**;**
 Structure, style , contents;
 Guidelines for research reporting;
 Style manuals – Chicago – MLA-APA etc;
 E-citation and methods of research evaluation.

Management of Library and Information Centers/Institutions
Unit– 1 Advanced Management Perspectives
 and schools of Management thoughts
 Management Information Science
 Functions and Principles of Scientific Management
 Total Quality Management
 Change Management: and
Performance Measurement
Unit– 2 Human Resource Management
 Human Resource Management: Selection, Recruitment, Training, Development,
Performance Appraisal
 Organizational Behavior
 Managerial Quality and Leadership
 Human Resource Planning and Development for Digital Environment
Unit– 3 Financial Management
 Budgetary Control and Techniques
 Costing Techniques
 Cost Analysis
 Resource Mobilization and Outsourcing
Unit– 4 System Analysis and Design
 Library Planning: Basic , Types and Procedures,
 System Approach
 Work Flow and Organizational Routine
 Monitoring and Control Techniques,
 Performance Management
Unit– 5 Collection management in electronic environment
 Electronic resources
 E-consortia

Information Analysis, Repackaging and Consolidation
Unit- 1Repackaging and Consolidation
 Packaging and Re-Packaging:, Purpose and Criteria
 Content Analysis
 Information Consolidation Products: Types, Design and Development
 Information Intermediaries
Unit- 2Information Analysis and Consolidation Centre's
 Genesis of Information Analysis and Consolidation(IAC) centre's
 Planning and Management of IAC centre's
 Data centre and Referral Centre
 IAC Centre's in India
Unit- 3 Tools for IAR
 Indexes, Abstracts, Reviews, Digests, Markets, Surveys
 Different Types of Abstracts
 Guidelines in Preparing Abstracts
 Canons of Abstracting
Unit- 4 Information Products
 Nature and Type
 Design and Development
 Information Newsletter, House Bulletin, In-House communications,
 Trade Reports, Technical Digest, and Trend Reports, state-of- the –art- reports
Unit- 5 Trends in Information Analysis, Repackaging and Consolidation
 Electronic Content Creation

Online Information System and Information Networks
International standards for Database Design and Development

Information Technology: Application (Practice)
Unit-1 Library Automation Software: CDS/ISIS and/or WINSIS
Software Installation/Uninstallation
 Creation of Worksheet, Data entry Fields, FST, FDT
 Searching Through WINSIS or CDS/ISIS
 Display of Search Results
Unit-2 Integrated Library Management Software
 Integrated Library Software packages: SOUL/koha
 Modules such as Acquisitions, Cataloguing, Circulation, Serial Control,
Administration and OPAC
 Installation of ILMS Software
Unit-3 Digital Library Software
 Overview of Digital Library Software: Greenstone, e-prints
 Creation of Digital Repository through D-Space and/or Greenstone
Unit– 4 Web designing
 Creation of web page using HTML
 Creation of blogs
Unit5: Content Management Software
 Function and use of any Content Management Software: Joomla, Drupal

Media and Information Literacy
Unit-1 Media and Information Literacy
 Media and Information literacy (MIL) definition, and purpose,
 Role of MIL in the Society
 Theories and models of MIL
 MIL policies and strategies
Unit-2 Information Literacy
 Information Literacy Standards: Foundations & Implications
 Information Literacy Guideline :UNESCO, IFLA and ALA
 Data Literacy: Definition, Importance and scope
 Digital Literacy: emerging wed service
Unit-3 Ethics and Laws
 Media and information ethics: cyber laws and ethics
 Social Media Platforms and Tools
 Media Ethics

Technical Writing and Content Development
Unit- 1 Structure and Functions of Technical Communication
 Structure : Definition, Purpose, Characteristics and Functions
 Collection, Organization and Presentation of Data including Illustration
 Characteristic Features of Technical Writing
 Linguistic as medium of Expression of Thought
Unit- 2 Content Analysis
 and Scope
 Technical Quantitative and Qualitative
 Content Analysis-Applications (generation of Information Services and products)
Unit- 3 Content Developments
 Content Development: Context setting, Norms and Guidelines
 Content Development software: JOOMALA, DRUPAL etc.
 Abstract Development, Citation styles

Digital Library: Fundamentals
Unit- 1 Digital Libraries
 Digital Libraries: and Definition
 Historical development of digital libraries
 Digital Libraries Planning and implementation
 Digital Library Services
Unit- 2 Digital Libraries-Hardware
 Software, Hardware and best practices
 Scanners and scanner types;
 OCR and OCR software
 Major component of Digital Library
Unit- 3 Digital Libraries-Software
 Open source software;
 Dspace, GSDL: Features and comparative study of Dspace, Eprints and Fedora
 Open standards and File formats, harvesting metadata
 Open Access and Digital Library
Unit- 4 Digital preservation
 Digital Preservation: scanning and OCR
 Persistent identifiers: DOI and CNRI Handles;
 Multilingual digital repositories
Unit- 5Preservation, Its Impact on Collection Development
 Preservation:, Areas, Limitations and Safeguards
 Preservations: Methods and Remedies
 Impact of IT on Collection Development

Information Sources, Systems and Programmes
Unit– 1 Information Sources
 Physical medium of information
 Print Media, Multimedia (Hypermedia) and Hypertext
 Non– Print Media: Microform, Electronic and Optical Media
 Evaluation of information sources- Print and electronic
Unit– 2 Information Sources for Users
 Content Analysis and its Correlation to Clientele
 Customized Organization of Information Sources
 Citation Analysis of Information Sources and their Use
 Aid to information
Unit– 3 Information Sources, Systems and Programmes
 Humanities
 Social Science
 Science and Technology
 Non Disciplinary Studies
Unit– 4 Information Experts as Resource Persons
 Library and Information Personnel
 Science and Technology Information Intermediaries
 Database Designers and Managers
 Media Personnel as Sources of Information
Unit– 5 Users and their Needs
 Information of Users
 Categories and Nature of different Information users
 Information Seeking Pattern
 User Studies/User Education:, Types and Methods
 Information Literacy Skills: An Introduction

Pre Ph D Course Work in Library and Information Science

Research Methodology and Computer Applications
4 Credits (100 Marks)
 Characteristics of Research
 Types of Research
 Research Design
 Review of Literature
 Hypothesis
 Data Collection
 Data Analysis Tools
 Methods of Research
 Research Reporting
 Computer Basics
 Word Processor
 Library Software
 Study of Electronic Resources
 Statistical Techniques

Contemporary Practices in Library and Information Science
4 Credits (100 Marks)
 Library Classification
 Cataloguing
 Library Networking
 Digital Information Resources
 Information Marketing : Products and Services
 Total Quality Management
 Use of ICT
 Digital Library Services
 Relational Database Management System
 User Studies
 User Education
 Library Science Education

Information and Knowledge Society
4 Credits (100 Marks)
 Information Society V/s Knowledge Society
 Data, Information and Knowledge
 Theories and Models of Communication
 Information Studies
 Knowledge Management
 Economics of Information
 E-Commerce and E-Governance
 Intellectual Property Rights
 Laws related to Information
 Information security
 Social Media and in Knowledge Society
 Digital Divide

Information Literacy Applications
4 Credits (100 Marks)
 Fundamentals of Information Literacy
 Information Literacy Programs
 Methodology of Information Literacy
 Information Literacy for users
 Trends in Information Literacy
 Information Seeking Behavior
 Models of Information Literacy
 Information Literacy Standards
 Information Literacy Guidelines
 Media Literacy
 Digital Literacy

Term Paper
Library Automation
 Digital Libraries
 Human Resource Development
 Library Consortium
 Web Based Library Services
 Information Analysis, Consolidation and Repackaging
Information Marketing
Information Sources
 Information Services
 Collection Development
 Bibliometrics
 Preservation and Conservation Library Materials
 Library Networking
 Resources Sharing
 Institutional Repository
 Open source Library Software
 Metadata
 Common Gateway Interface
 Information Retrieval in Libraries
Digitization etc…

Indira Gandhi National Open University

Master's Degree Programme in Library and Information Science (MLIS) and BLIS

MLI-101: INFORMATION, COMMUNICATION AND SOCIETY
Block-1: Information: Nature, Property and Scope
Unit 1: Data, Information and Knowledge: Intellectual Assets Unit 2: Data: Definition, Types, Nature, Properties and Scope
Unit 3: Information: Definition, Types, Nature, Properties and Scope Unit 4 : Knowledge: Definition, Types, Nature, Properties and Scope **Block-2: Information Generation and Communication**

Block-2: System Analysis and Control
Unit 5 : Systems Approach
Unit 6: Work Flow and Organisation Routine Unit 7: Monitoring and Control Techniques
Unit 8 : Performance Measurement and Evaluation Techniques
Block-3: Human Resource Management
Unit 9 : Organisational Behaviour
Unit 10 : Managerial Quality and Leadership
Unit 11: Human Resource Planning and Development
Block-4: Financial Management
Unit 12: Budgeting and Types
Unit 13: Budgetary Control System Unit 14: Costing Techniques
Unit 15: Cost Analysis
Block-5: Marketing of Information Products and Services
Unit 16: Information as a Marketable Comodity Unit 17: Marketing: Approach and Techniques Unit 18: E-Marketing
MLII-101: INFORMATION SOURCES, SYSTEMS AND SERVICES
Block-1: Information Institutions
Unit 1: Information Institutions: Evolution, Growth Functions and Types Unit 2: Information Centres: Types and their Organisation
Unit 3: Data Centres and Referral Centres
Unit 4: Information Analysis and Consolidation Centres
Block-2: Information Sources, Systems and Programmes
Unit 5: Information Sources: Categorisation Unit 6: Print and Non-Print Sources
Unit 7: National Information Systems and Programmes 14

Unit 8: Global Information Systems and Programmes
Unit 9: National and International Information Organisations
Block-3: Information Products and Services
Unit 10: Information Products - Part I Unit 11: Information Products - Part II Unit 12: Information Services - Part I Unit 13: Information Services - Part 11
Block-4: Information Intermediaries as Sources of Information
Unit 14: Library and Information Professionals Unit 15: Information Intermediaries
Unit 16: Database Designers and Managers Unit 17: Database Intermediaries
Unit 18: Media Persons Unit 19: Intelligent Agents
MLII-102: INFORMATION PROCESSING AND RETRIEVAL
Block-1: Organization of Information
Unit 1: Intellectual Organization of Information
Unit 2: Indexing Languages Part-I - and Types, Subject Headings Lists and Thesauri Unit 3: Indexing Languages Part-II - Classification Schemes
Unit 4: Indexing Systems and Techniques Unit 5: Evaluation of Indexing Systems **Block-2: Bibliographic Description**
Unit 6: Principles and Evolution of Bibliographic Description Unit 7: Rules for Bibliographic Description
Unit 8: Satandards for Bibliographic Record Format
Unit 9: Metadata : MARC 21-856 Field, Dublin Core, TEI
Block-3: Content Development
Unit 10: Norms and Guidelines of Content Development Unit 11: Introduction to HTML and XML 15

Unit 12 Web-based Content Development
Unit 13: Multilingual Content Development (Using Unicode)
Block-4: Information Storage and Retrieval Systems
Unit 14: ISAR Systems: Objectives and Types, Operations and Design Unit 15: Compatibility of ISAR Systems
Unit 16: Intelligent IR Systems
Block-5: Information Retrieval
Unit 17: Information Retrieval - Processes and Techniques Unit 18: Information Retrieval - Models and their
Applications Unit 19: Search Strategy - Processes and Techniques
MLII-103: FUNDAMENTALS OF INFORMATION COMMUNICATION TECHNOLOGIES
Block-l: Computer Technology Unit 1: Architecture and Technology Unit 2: Software
Unit 3: Programming
Block-2: Communication Technology
Unit 4: Fundamentals of Communication Technology Unit 5: Networks and Networking
Unit 6: Data Networks
Unit 7: Convergence Technology and Applications **Block-3: Media and Publishing Technology** Unit 8: Print
and Non-Print Media
Unit 9: Publishing and Printing Technology
Unit 10: E-Publishing and Networking Publishing Unit 11: Reprography and Micrography
Block-4: Resource Sharing Networks Unit 12: Library and Information Networks Unit 13: Bibliographic Utility
Networks
Unit 14: Library and Information Networks in India 16

MLII-104: INFORMATION AND COMMUNICATION TIECHNOLOGIES - APPLICATIONS
Block-1: Database Design and Management
Unit 1: Database: and Components
Unit 2: Database Structures, File Organisation and Physical Database Design Unit 3: Database Management Systems
Unit 4: Database Searching **Block-2: Library Automation** Unit 5: Housekeeping Operations
Unit 6 Software Packages - Features
Unit 7: Digitization:, Methods and Equipment
Block-3: Library and Information Services
Unit 8: Alerting Services
Unit 9: Bibliographic Full Text Services Unit 10: Document Delivery Services Unit 11: Reference Services
Block-4: Internet Resources and Services
Unit 12: Basics of Internet
Unit 13: Use of Search Engines Unit 14: Internet Services
Unit 15: Internet Information Resources Unit 16: Evaluation of Internet Resources
MLII-105: INTERNSHIP
Kindly refer detailed standard operating procedures of internship available on the IGNOU website. 17

ELECTIVE COURSES
MLIE-101: PRESERVATION AND CONSERVATION OF LIBRARY MATERIALS
Block-1: Library Materials: Preservation and Conservation
Unit 1: Preservation and Conservation Unit 2: Historical Development of Writing Materials
Unit 3: Palm Leaves _Birch' Bark: Their Nature and Preservation
Unit 4 : Manuscripts, Books, Periodicals, Newspapers, Pamphlets, etc. Unit 5: Non-book Materials
Block-2 : Hazards to Library Materials and Control Measures
Unit 6: Environmental Factors Unit 7: Biological Factors Unit 8: Chemical Factors Unit 9: Disaster Management
Block-3: Binding
Unit 10: Types of Binding Unit 11: Binding Materials Unit 12: Binding Process
Unit 13: Standards for Binding
Block-4: Restoration and Reformatting
Unit 14: Material Repair
Unit 15: Microfilming and Digitisation
MLIE-102: RESEARCH METHODOLOGY
Block-1: Fundamentals of Research Unit 1: Research: Meaning, , Unit 2: Historical Research
Unit 3: Survey Research
Unit 4: Experimental Research
Unit 5 Fundamental, Applied and Action Research
Block-2: Tools for Research Unit 6: Measurement of Variables 18

Unit 7: Data Presentation

Unit 8: Statistical Techniques Unit 9: Statistical Packages **Block-3: Research Methods** Unit 10: Observation Method Unit 11: Questionnaire Method Unit 12: Interview Method

Unit 13: Experimental Method Unit 14: Case Study

Block-4: Research Process Unit 15: Research Design Unit 16: Research Plan

Unit 17: Statistical Inference Unit 18: Presentation of Results

MLIE-103: ACADEMIC LIBRARY SYSTEM

Block-1: Development of Academic Libraries

Unit 1: Academic Libraries: Objectives and Functions

Unit 2: Role of UGC and other Bodies in Promoting Libraries in Universities, Colleges and other Institutions of Higher Learning

Unit 3: Library Governance

Unit 4: Academic Library Services

Unit 5: Financial Management of Academic Libraries

Block-2: Collection Development

Unit 6: Collection. Development Policy/Weeding out Policy Unit 7: Problems in Collection Organisation

Unit 8: Collection Development Programmes

Block-3: Staffing Pattern and Staff Development for Academic Libraries

Unit 9: Norms and Patterns of Staffing

Unit 10: Continuing Education Programmes (CEP) Unit 11: Personnel Management 19

Block-2: Informetrics: Elements and Applications
Unit 6: Law of Scattering and its Applications Unit 7: Rank and Size Frequency Models Unit 8: Informetrics Phenomena
Unit 9: Analysis of Library Related Data Unit 10: User Studies
Block-3: Scientometrics: Elements and Applications
Unit 11: Laws of Scientific Productivity
Unit 12: Growth and Obsolescene of Literature Unit 13: Science Indicators
Unit 14: Mapping of Science
Block 4: Techniques and Modeling in Informetrics and Scientometrics
Unit 15 : Elements of Statistics
Unit 16 : Probability Distributions and their Applications Unit 17 : Regression Analysis
Unit 18 : Cluster Analysis and Factor Analysis
MLIE-106: PUBLIC LIBRARY SYSTEM AND SERVICES
Block-1: Public Library: Basics Unit 1: Public Library: Origin and Growth Unit 2: Public Library and Society
Unit 3: Agencies in the Promotion and Development of Public Library System Unit 4: National Library Policy and Library Legislation
Block-2: Public Library System: Resource Development
Unit 5: Development Plans and Resource Mobilisation Unit 6: Financial Resources
Unit 7: Physical and Documentary Resources Unit 8.: Human Resources
Block-3: Management of Public Library System Unit 9: Organisational Structure of Public Library System Unit 10: Planning and Administration of Public Libraries 21

Unit 11: Public Library Norms, Standards and Guidelines Unit 12: Governance of Public Libraries
Unit 13: Performance Evaluation **Block-4: Public Library Services** Unit 14: Types of Library Services
Unit 15: Application of Information Technology in Public Library Services Unit 16: Resource Sharing
Networking
    Unit 17: Public Library Scenario in India, UK, USA and Canada

Courses with Seminar Component Core Courses
INFORMATION, COMMUNICATION AND SOCIETY
MANAGEMENT OF LIBRARY AND INFORMATION CENTRES
Electives
PRESERVATION AND CONSERVATION OF LIBRARY MATERIALS MLIE-102: RESEARCH
METHODOLOGY
ACADEMIC LIBRARY SYSTEM MLIE-104: TECHNICAL WRITING
    INFORMETRICS AND SCIENTOMETRICS MLIE-106 PUBLIC LIBRARY SYSTEM AND SERVICES

MODEL TOPICS FOR SEMINAR

MLI-101: Information, Communication and Society
1. Post-industrial Society.

2. CODATA Task Group (on Accessibility and Dissemination of Data).

3. Free Flow of Information (Barriers to Information).

4. Information Communication Chain.

5. Information Generation Process.

6. Shannon Weaver Model.

7. Holistic and Spectrum Approaches to Knowledge.

8. Growth Patterns of Disciplines.

9. Role of Information Scientists in Knowledge Utilisation.

10. Components of National Information Policy.

11. Information Economics.

12. Information Society.

13. National Information Infrastructure.

14. Digital Information.

15. Digitisation of Information.

16. Knowledge Professionals.

17. Knowledge Society.

18. Knowledge Management.

MLI-102: Management of Library and Information Centres

1. Management Framework for Libraries.

2. Role of Management Information System (MIS) in Planning and Controlling.

3. Leadership Styles.

4. Library and Information Systems.

5. Time and Motion Studies.

6. Operation Research in Libraries.

7. Management by Objectives (MBO).

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8. Human Resource Management in Libraries.

9. Human Resource Planning for Libraries and Information Centres.

10. Total Quality Management (TQM).

11. Methods of Financial Estimation in Libraries.

12. Performance Management for Libraries and Information Centres.

13. Change Management .

14. Organisation Behaviour in Libraries and Information Centre.

15. Implication of e-marketing.

16. Budgetary Control for not-for-profit Organisations.

17. Cost Effectiveness Analysis vs. Cost Benefit Analysis.

18. Information as a Marketable Commodity.

19. Market Segmentation.

Elective Courses
MLIE-101: Preservation and Conservation of Library Materials
1. Inherent Characteristics of Library Materials and their Preservation.

2. History of Writing Materials in India.

3. Preservation and Conservation of Palm Leaf Manuscripts.

4. Preservation and Conservation of Birch Bark Manuscripts.

5. Preservation and Conservation of Non-book Materials.

6. Preservation of Optical Media.

7. Environmental Factors as Detractors to Library Materials.

8. Control Measures for Protection of Library Materials from Biological Pests.

9. Preventive Conservation.

10. Binding for Different Type of Library Materials.

11. Binding Materials.

12. Stages of Binding Process.

13. International Standards for Binding.

14. Indian Standards for Binding.
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15. Book Pests.

16. Disaster Management for Libraries.

17. Restoration Procedures for Library Materials.

18. Organisation for Knowledge Preservation.

MLIE-102: Research Methodology
1. The Quest for Solutions to Practical and Theoretical Problems Result in Research Activity.

2. Research in Library and Information Science leads to the Design and Better Management Skills on the Part of an Information Professional.

3. Library Science Research and Development of Operational Skills.

4. Basic Research vs. Applied Research: Objectives and Methods.

5. Research Techniques are Means Rather than Ends in Themselves.

6. Identification of a Research Problem.

7. Survey Analysis and Content Analysis as Methods of Research.

8. Presentation of Results of Research.

9. Time Series and its Components — Contribution to Research Techniques.

10. Steps involved in the Analysis of Data for the Preparation of a Research Report.

11. Drafting of Research Report.

12. Statistical Methods in LIS.

13. Designing a Questionnaire (Real example)

14. Preparing a Proposal (Real example)

15. Preparing a Research Report (Real example)

MLIE-103: Academic Library System
1. Academic Libraries Provide Access to Scholarship.

2. Academic Libraries form the Keystone in the Arch of Higher Education.

3. Role of Academics in Promoting Library Use.

4. Should we Go for Fee or Free Based Library Services in an Academic Library System?

5. Library Governance.

6. Library Collections are Described as ―Instructors of Instructors‖.

7. The Success of an Academic Library Depends Much on its Personnel.
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8. Teleconferencing as a Continuing Delivery System.

9. Resource Sharing Avoids Duplication of Money, Manpower and Material.

10. Library Networks Facilitate Sharing and Optimum Use of National and International Information Resources.

11. Resources and Services of INFLIBNET.

12. Role of UGC in Modernising the Library Services.

13. UGC Service Conditions and Pay Scales Enhance the Status of the Professionals.

14. Information Based Learning and Teaching.

15. E-consortia Approach to Academic Libraries.

MLIE-104: Technical Writing
1. Reader-writer Relationship.

2. Aberrations in Technical Writing.

3. Tools for Technical Writing.

4. Preparation of Technical Reports.

MLIE-105: Informetrics and Scientometrics
1. The Journey from Bibliometrics to Informetrics is Characterised by Development in Methods and Techniques Rather Than Objectives and Purposes.

2. Mathematical Models and their Application in Scientometrics and Informetrics.

3. Bibliometrics and Informetrics Laws and their Implications in Library and Information Science.

4. The Development of Science Citation Index is a Landmark for Scientometrics and Informetrics Studies.

5. Measuring Scientific Productivity - Problems and Prospects.

6. Growth and Obsolescence Study of Literature - A Means for Library and Information Centre Management.

7. Science and Technology Indicators – A Tool for Policy and Decision Makers.

8. Understanding Science in Developing Countries - A Methodological Approach Through Scientometrics and Informetrics.

9. Approaches to Modeling in Scientometrics and Informetrics.

MLIE-106: Public Library System and Services
1. Public Libraries Serve as an Instrument of Social Change.

2. Development of Public Libraries an Appropriate Policy at State and National Level.
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3. Physical, Financial and Human Resources Constitute an Effective Public Library System.

4. Planning Helps to Systematically Move Towards Achievement of Goals.

5. The Success of Management of Public Library System Depends Much on its Governance.

6. Performance Evaluation is an Important Tool to Measure the Strength and Weakness of Public Library System.

7. Accessibility Plays an Important Role in Providing Library Services.

8. Resource Sharing and Networking among Public Libraries Improve Quality of Library and Information Services.

Dr Zakir Husain Library Academic Bulletin(Jamia Millia Islamia)

Foundation of Library and Information Science
Unit-1: Library as a Social Institution
- Social and historical foundation of Library
- Different types of Libraries and their distinguishing features and functions
- Five Laws of Library Science & their implications in Library & Information Activities

Unit-2 : Professional Associations and their functions
- Professional Associations: ILA, IASLIC, ALA, ASLIB
- National and International Organisations: RRRLF, UNESCO, IFLA
- Professional skills, Ethics and Competencies

Unit-3: Library Development: Historical perspectives
- Development of Libraries in India since Independence
- National Knowledge Commission (NKC) with regard to Libraries
- Role of UGC& INFLIBNET in the development of College & University Libraries in India

Unit-4: Library Legislation
- Library legislation- and essential features
- Library legislation in India
- Delivery of Books (Public Libraries) Act, 1954 & Copyright Act of India, 1957 (with amendments)
- Intellectual Property Rights: Conventions, Laws, etc
- Information Technology Act, 2000 (with amendments)

Library Classification (Theory)
Unit-1: Elements of Library Classification
- Library Classification:, Purpose & Functions
- Modes of formation of subjects
- Universe of subjects as mapped in different schemes of classification
- Library Classification Schemes: DDC&CC

Unit-2: Theory of Classification
- Normative Principles of Classification
- Canons and their applications in classification schemes
- Mnemonics: Definition and their types

Unit-3: Approaches to Library Classification
- Facet Sequence: and Principles
- Postulation approach & systems approach in Practical Classification
- Phase relation & devices in Library Classification
- Species of Classification Schemes

Unit-4: Notation & Construction of Class Number
- Notation: purpose, types and qualities
- Call Number: Class Number, Book Number and Collection Number
- Construction of Class Number

Library Cataloguing (Theory)
Unit-1: Fundamental s & Historical development
- Library Catalogue: Definition, Purpose & Functions
- Library Cataloguing Codes: History & Development
- Physical forms of Library Catalogue
- Types of Catalogue: Dictionary and Classified

Unit-2: Types of Catalogue Entries (AACR-II & CCC)
- Kinds of Entries

- Cataloguing Rules according to AACR-II and CCC for Personal Authors, Joint authors, Corporate Authors and Pseudonyms & Non-print resources
- Bibliographic standards for record format: ISBD, MARC-21, CCF, RDA, Bibframe, FRBR
- Bibliographic standards for Information interchange: ISO 2709, Z39.50, Z39.7

Unit-3: Subject Cataloguing:, Principles
- Subject Headings Lists: LCSH, SLSH
- Indexing: Pre-coordinate and Post-coordinate
- Vocabulary Control & Thesaurus

Unit-4: Centralized and Cooperative Cataloguing
- Union Catalogue:, Rules for Compilation
- NUCSSI, IndCAT, WorldCat

Information, Communication and Society
Unit-1: Information: Nature, Property and Scope
- Data: Definition, Types, Nature, Properties and Scope
- Information: Definition, Types, Nature, Properties and Scope
- Knowledge: Definition, Generation and Utilization

Unit-2: Information Generation and Communication
- Generation of Information: Modes and Forms
- Communication Process and Media

Unit-3: Information and Society
- Social Implications of Information
- Using Information Effectively, Controlling Fake News

- Information Policies: National Library and Information Policy of India
- Role of Information in Planning, Management and R & D

Unit-4: Study of Information Systems and Networks
- National Information Systems and Networks: NISCAIR, DESIDOC, SENDOC, ENVIS, INFLIBNET, NICNET, ERNET, etc.
- International Information Systems and Networks: AGRIS, INIS, MEDLARS, INSPEC, BIOSIS, ERIC, Patent Information System (PIS)
- Resource Sharing Networks; OCLC and DELNET

Information and Communication Technology (ICT) in Library & Information Science (Theory)
Unit-1: Introduction to Computers
- Computer: Generation, types, Storage, Input & Output devices
- Introduction to System Software & Application Software
- Operating System: Windows/Linux
- Database Management System (DBMS)

Unit-2: Library Automation
- and purpose of Library Automation

- Library Software packages (SOUL 2.0/KOHA): Overview & Housekeeping operations

- Bar coding: and Applications
Unit-3: Computer Networks and Communications
- Telecommunication:, & Purpose
- Network Devices (Repeaters, Hub, Bridges, Switch, Router, MODEM)
- Network Topologies: Bus, Star, Mesh, Ring; Network Types: LAN, MAN, WAN
- Network protocols: TCP/IP, SHTTP, SMTP, URI, URL , TP, HTTP
- Modes of Connectivity: Dial up, ISDN, Leased Lines, Blue tooth, Mobile, Wi-fi etc.

Unit-4: Introduction to Internet
- Basics of Internet
- Search Engines & Meta search Engines
- Online Searching (Simple & Advanced Searching Techniques)

- Retrieving Information from e-resources & online databases

Management of Library and Information Centres
Unit-1: Principles of Library Management
- General & Scientific Management: Functions and Principles

- Total Quality Management (TQM): , Principles and Techniques
- Project Management: SWOT, PEST, PERT/CPM
- Marketing of Library Services & Products

Unit-2: Library Human Resource Management
- Library Organizational Structure
- Library Authority, Library Committee
- Job Description and Analysis; Job evaluation, Performance Appraisal
- Different Sections of Library & Information Center and their functions

Unit-3: Library Finance and Budgeting
- Sources of Finance

Library Classification (Practice)

Unit-1: Classification of Documents using DDC (19th Edition)
- Classification of documents using Table-1 to Table-4
- Classification of documents using Relative Index

Unit-2: Classification of Documents using DDC (19th Edition)
- Classification of documents using Table-5 to Table-7

Unit-3: Classification of Documents using CC (6th Edition)
- Classification of documents with basic subjects

- Classification of documents with compound subject& Use of Common Isolates

Unit-4: Classification of Documents using CC (6th Edition)
- Use of Common Isolates, Phase relations & Devices

- Classification of documents with Complex subjects

- Budgeting Techniques and Methods-Item Budget, PPBS, Zero Based Budgeting, Cost Effective and Cost Benefit Analysis
- Preparation of Budget for different types of Libraries

Unit-4: Collection Development & Preservation
- Types of Reports, Compilation of Annual Report
- Collection Development Policies, Selection Tools, Collection Evaluation
- Stock Verification: Policies and Procedures
- Preservation & Conservation of Library materials

Library Cataloguing (Practice)

Unit-1:Anglo-American Cataloguing Rules-II (AACR-II)
- Works of Single & Shared authorship
- Works of mixed responsibility
- Editorial Publications
- Series Publications
- Multi-Volumes

Unit-2: Anglo-American Cataloguing Rules-II (AACR-II)
- Composite Books
- Works of Corporate Authorship: Government, Institution and Conference

- Works of Conflict Authorship
- Periodical Publications

Unit-3:Classified Catalogue Code (CCC)
- Works of Single & Shared authorship
- Works of mixed responsibility
- Editorial Publications
- Series Publications
- Multi-Volumes

Unit-4:Classified Catalogue Code (CCC)
- Composite Books
- Works of Corporate Authorship: Government, Institution and Conference

- Works of Conflict Authorship
- Periodical Publications

Information and Communication Technology (ICT) in Library & Information Science (Practice)

Unit-1: Operating Systems and Application Software
- Setting of Desktop
- Creating presentations with the help of PowerPoint
- Creating Spreadsheets
- Editing & Formatting Word Documents

Unit-2: Database creation using SOUL 2.0/KOHA
- Creation of database: Import & Export
- Printing of Records of database
- Printing of Bar-code

Unit-3: Library Software (SOUL 2.0/KOHA)
- Installation, Configuration & Application
- Hand on practice on different modules
- Searching OPAC & Printing of Catalogue/Database
- Creation of Barcode

Unit-4: Online/Offline Searching
- Searching of E-resources/databases
- Searching through Meta Search Engines
- Federated Search Engines
- Library OPAC

Information Sources and Services

Unit-1: Information Sources: An overview
- Meaning, Definition, Importance, Nature and Characteristics
- Types of Information Sources and Services
- Criteria for Evaluation of Reference Sources

Unit-2: Types of Information Sources
- **Primary Sources**: Periodicals, Conference proceedings, Patents, Standards, Theses, Research reports, Trend Reports, Trade Literature, etc.

- **Secondary Sources**: Dictionaries, Encyclopedias, Biographical, Geographical, Indexes & Abstracts, Current Events Sources, Almanacs, Year Book, Handbooks, Statistical Sources, Bibliography, etc.

- **Tertiary Sources**: Bibliography of Bibliographies, Union Catalogues, Directory, etc

Unit-3: Reference and Information Services
- Users and their Information s
- Nature & Kinds of Reference and Information Services
- Web based Information services
- Role of Web 2.0 and Social Media in information dissemination

Unit-4: Types of Information Services
- Documentation Services: Abstracting and Indexing Services
- Alerting Services: CAS, SDI
- Document Delivery & Electronic Document Delivery Service

MLISc

ELECTRONIC INFORMATION SOURCES AND SERVICES
Unit-1: Electronic Resources
- Characteristics & Features, Formats, Advantages, etc.
- Forms of e-Resources: e-journals, e-books, e-zines, e-prints, e-content pages, web pages, e-mails, Listservs, blogs, wikis, CD-ROM databases, Full text databases, Bibliographic databases, Multimedia, Statistical and Financial Databases ETDs, e- images, e-music, etc.
- Open Access e-Resources: Journals, Books, Open Course Ware, Repositories

Unit-2: Selection &Licensing of E-Resources
- Principals and Methods of Selection of E Resources
- Principles for Licensing e-journals
- Major points in License Agreements, Clauses for License Agreement
- Licensing criteria : Content volume, Duration of Access, Size of User Population,
- Computing devices used for access
- Access Models: Perpetual access rights, Limited period access rights, etc.
- Aggregators, Distributors, Publishers & Subscription Agencies
- Access, Authentication& Remote Access

Unit-3: Pricing and Supply Models of Electronic Resources
- Basic approaches to Journal pricing: Cost plus and Value based
- Pricing Models (subscribed) and Open Access Models
- Pricing & Negotiation of Databases and E-books
- Supply Models: Single user, Multi user, Single Site & Multiple site & Country wide
- Institutional & Consortia Pricing Models
- Digital Commerce Models

Unit-4: E- Resource Management
- Digital Right Management
- Federated Searching and Discovery Services
- Electronic Resources Management Skills
- Evaluation & Monitoring
- Usage Pattern & Systematic Downloads

PLANNING AND MANAGEMENT OF LIBRARY & INFORMATION SYSTEMS

Unit-1: Policy & Planning of Libraries in India
- Present status of Libraries in India.
- Role of UGC in the growth & development of Academic Libraries in India
- Committees & Commissions: Kothari Commission, Radhakrishnan Commission, Mudaliar Commission, etc.
- Role of Libraries in Formal and Non-Formal Education System

Unit-2: Library Organization & Administration
- Library authority and its decentralization
- Manpower Development: Qualifications, recruitment, Job description, job analysis, staff manual.
- Collection Development: Print and Non-Print including Electronic documents.
- Library Building, furniture & equipment: Green Library Building, Information Commons, Makers Space, Security and Safety.

Unit 3: Types of Library Systems
- Academic Library System
- Public Library System
- Special Library System
- Basics of other Library Systems such as Health, Engineering, Agriculture, etc

Unit-4: Trends in Library Management Systems
- Management Information System (MIS)
- Change Management
- Disaster Management, Crisis Management
- Knowledge Management: Principles, Tools, Components & Architecture

ADVANCED KNOWLEDGE ORGANISATION: CLASSIFICATION (PRACTICE)

Unit-1: Classification of Documents according to UDC (3rd Abridged Ed.)
- Classification of Documents representing simple subjects.
- Classification of Documents using Auxiliary tables.

Unit-2: Classification of Documents according to UDC (3rd Abridged Ed.)
- Classification of documents representing compound subject.
- Classification of documents representing complex subject.

ADVANCED KNOWLEDGE ORGANIZATION: CATALOGUING (PRACTICE)

Cataloguing of Non Book Material and Electronic Resources According to AACR-II
Unit-1: Non-Book Materials
- Complexities of Periodicals
- Manuscripts
- Cartographic Materials
- Microforms
- Graphic Materials

Unit-2: Electronic Resources
- Sound Recordings
- Motion Pictures & Video Recordings
- Computer Files
- Web Resources

Information and Communication Technology (ICT) Applications in Library & Information Science (Theory)

Unit-1: Web Technologies in Libraries
- Web 2.0:, features, Tools and Services: Webcast, Web Conferencing, Blogs, Wikis, Online chat, Online forms and Discussion Groups

- Cloud Computing:, Benefits, Application in Libraries

- Web Directories, Subject Gateways, Library Portals, etc.

Unit-2: Integrated Library Automation and Networking Software
- Open Source Library Software and Applications
- Web based Library Management Software
- Library Software Securities Parameters

Unit-3: Digitization & Digital Libraries
- Digital Preservation:, Purpose, Planning and Issues
- Digital Libraries (DL) and Virtual Libraries:, Objectives and Advantages
- Meta Data: and Types
- Digital Libraries Software: Steps of building Digital Libraries using Greenstone Digital Library (GSDL), Dspace, Eprints

Unit-4: Emerging Technologies in Libraries
- Mobile based Library Services (WhatsApp, Quick Response (QR) codes, etc)
- Library Security Systems: RFID, Smartcard, Biometrics
- Expert Systems and Robotics in Libraries
- Content Management Systems: Drupal, Joomla, etc.
- Data Security, Network Security, Firewalls, Cryptographic Techniques, Anti-virus software, Anti-spyware, Intrusion Detection System

Research Methodology

Unit-1: of Research
- Research: Definition, , and Types of research (Qualitative and Quantitative).
- Research design
- Formulation of problem.
- Hypothesis formulation.
- Literature search: Print and Non-print and Electronic Sources.

Unit-2: Research Methods, Techniques and Tools
- Types of Research Methods: Scientific, Historical, Descriptive, Survey, Case Study, Delphi and Experimental.
- Research Techniques and Tools: Questionnaire, Schedule, Interview, Observation, Scales and Checklist, library records and reports.
- Sampling techniques.

Unit-3: Data Analysis and Interpretation
- Statistical Techniques: Descriptive statistics (Mean, Mode, Median).
- Measures of Dispersion: Mean deviation, Standard deviation.

- Presentation of Data: Tabular, graphic, bar diagram, pie-line graphics. Computerized data analysis: Use of SPSS and Spreadsheets, Bibexcel, R-Statistics.

Unit-4: Research Reporting, Referencing styles, Metric studies and Plagiarism
- Structure, style, contents, guidelines of Research Reporting.
- Style Manuals –MLA, APA, Harvard, Chicago, IEEE, etc.
- Metric studies in Library & Information Science: Scientometrics, Webometrics and Altmetrics.
- Impact Factors-Journal, Institutional and Authors, h-index, g-index, i10 index

Information and Communication Technology (ICT) Applications in Library & Information Science (Practical)
- Designing and Developing Library Websites
- Designing and Developing Mobile Library Websites
- Advanced Internet Searching
- Google Services & Resources
- Hands on Integrated Library Management Systems: KOHA/SOUL 2.0
- Managing measuring & maximizing research impact: Tools & Techniques

- Online Citation Tools - Citation Machine, Bibme, EasyBib, Harvard Generator, etc.
- Plagiarism: Detection tools- Turnitin, Urkund, Copy catch, CopyScape, Duplichecker, Viper, etc
- Reference Management tools - Mendeley, EndNote, Refworks, etc
- Academic Social Networking Tools- ResearchGate, Academia, CiteULike, Connotea, etc.

Information Storage and Retrieval
Unit-1: Information Storage and Retrieval Systems
- and Components.
- Assigned and Derived Indexing.
- Assigned Subject Headings: Library of Congress Subject Headings, Sears List of Subject Headings and Medical Subject Headings.
- Principles of Subject Indexing.

Unit-2: Pre & Post-Coordinate Indexing Systems
- Chain Indexing, PRECIS, POPSI.
- Uniterm Indexing
- Key Word Indexing: KWIC, KWAC, KWOC.
- Citation Indexing.
- Automatic Indexing.

Unit-3: Vocabulary Control
-, Purpose, Functions and Problem.
- Types and Characteristics of Vocabulary Control and its Tools: Thesaurus,
- Structure and Construction of an IR Thesaurus (UNESCO Thesaurus).
- Trends in Vocabulary Control.

Unit-4: Information Retrieval Models and Evaluation
- Search Strategies: Manual/Machine.
- Feedback and Refining.
- Evaluation of Information Retrieval Systems: Precision and Recall.
- Information Retrieval Projects (SMART, MEDLARS and Cranfield).

Information Literacy Applications in LIS

Unit-1: Fundamental of Information Literacy
-, and Purpose
- Areas of Information Literacy
- Standards & Models of Information Literacy
- Role of Libraries in Information Literacy

Unit-2: Information Literacy Programmes
- Types of Information Literacy Programmes in Libraries
- Study of Information literacy programmes in India;
- Study of Information literacy programmes: UK, USA and Australia;

Unit-3: Information Literacy Products and Designing ILP
- Information Literacy Products: Library Brochure, Database Brochure, Web-based Access Instructions, Information Bulletin, etc.
- Designing of Information Literacy Programme

Unit-4: Trends in Information Literacy
- Current trends in information literacy.
- Mobile based Information Literacy

MAHATMA GANDHI CENTRAL UNIVERSITY
M. Lib. I. Sc + B. Lib. I. Sc.

Research Methodology
Unit I: Foundations of Research and Research Design
Meaning, Need and Process of Research
Types of Research: Fundamental and Applied
Research Design, Types of Research Design
Designing Research Proposal, Literature Search and Literature Review
Unit II: Research Methods
Types of research: Qualitative and quantitative method of LIS research
Scientific Method
Historical Method, Survey and Case Study Method
Experimental Method
Unit III: Data Analysis and Interpretation
Data Collection Techniques: Questionnaire, Interview, Observation, Sampling and Delphi
Presentation of Data-Tables, Charts and Graphs
Interpretation of Data: Frequency Distribution, Measures of Central Tendency,
Analysis of Time Series, Co-relation Studies and Analysis of Variance
Use of Statistical Packages
Unit IV: Statistics and its Applications➢ Descriptive Statistics – Measures of Central Tendency: & Dispersion, Correlations and
linear regression, Chi-Square test, t-test, z-test, f-test➢ Presentation of Data: Tabular, Graphic, Bar Diagram and Pie Chart, etc. Report Writing
Statistical Packages – MS-Excel, SPSS, and Web-based Statistical Analysis Tools, etc.
Plagiarism- Self plagiarism, anti-plagiarism guidelines and software
Metric Studies - Scientometrics, Infometrics and Webometrics
Style Manuals- Manual Structure, Style, Contents- MLA, APA, CHICAGO.

Marketing of Library and Information Products and Services

Unit I: Information Analysis
Information: Basic s
Consolidation and Repackaging of Information:, and process.
Guiding Principles for arrangement and presentation of idea in a helpful sequence.
Packaging and Repackaging of Information products
Unit II: Information Products
Information Products: s, nature, definitions, design and types
Information News-letters, Hand Books, House Bulletins
In-house Communication, Trade Bulletin, Product Bulletin, State-of-the-Art Report, Trend Report
Technical Digests: Nature, , types, design; and development.
Unit III: Content Analysis
Content Analysis: types and processes.
Abstract: Definition and types, Characteristics and Qualities of good abstracts.
Abstracting:, process. Computers and Abstracting.
Abstracting organizations and Services.
Unit IV: Planning, Management and Marketing
Planning and Management of Information Analysis and Consolidation
Marketing of Information and benefits;
5 Ps of Information Marketing; Marketing of profit and non- profit organization;
Trends in marketing of Information Services; and Information Marketing in India.

Intellectual Property Rights & Copyright
Unit I: Intellectual Property and Rights
Intellectual Property:, Genesis, Development and Categories
Enforcement of Intellectual Property Rights
Role of WIPO
Emerging Issues in Intellectual Property Rights
Unit II: Copyright
Copyright: Meaning and Scope
Rights to Copyright Owner
Licensing of Copyright
Copyright Laws and Related Issues
Unit III: Patents
Patent: and Scope
Patent Laws in India
Patent Laws in Abroad
Violation and Infringement, Violation and Infringement - India - USA - UK
Unit IV: Copyright& Patent in Digital Era
Intellectual Property Digital Era: Meaning and Development
IPR Acts
Application of IPR in Electronic Environment
Copyright of Electronic Resources

Electronic Publishing
Unit I: Electronic Publishing
Scope

Nature
Types
Unit II: Open Access Sources of Electronic Publishing
Evolution of OAI
Open Access Sources
Pricing and Pricing models
Current Trends in E-publishing
Unit III: Formats and Structure of E-Publishing
Format of E-Publishing
Structure of E-Publishing
Languages of E-publishing
Unit IV: Issues of E-Publishing
Socio issues in E-Publishing
Economic issues in E-Publishing
Legal issues in E-Publishing

Information and Communication Technology Applications in LIS
(Theory)
Unit I: Library Automation
Purpose, Planning and Implementation
Library Automation Software: Types and Features
Open Source Library Software: Koha, Greenstone &D-Space
Automation of Housekeeping Operations: Acquisition, Cataloguing, Circulation,
Serials Control
Unit II: Automated Services
Electronic Reference Services
Bibliographic and Database Search Services
CAS/SDI in Automated Environment
Electronic Document Delivery Service, Library 2.0
Unit III: Library Networks and Consortia
Objectives, scope and characteristics
Major Library Networks: INFLIBNET, DELNET, OCLC
Library Consortia: E-ShodhSindhu
Unit IV: Library Security Technology
Barcode
RFID
CCTV, Biometrics, Smartcard

Content Management & Digital Library
Unit I: Content management
 Content creation and Principles of CMS
CMS Architecture; system and data integration in CMS.
Creating and managing web page and content on web page
Fundamentals of planning dynamic websites
Unit II: Content management Software and Application
Overview of CMS software such as Wordpress, Drupal, Joomla, and others to create
dynamic and flexible websites
Evaluation of CMS.
Application of CMS; CMS and community information systems
Document management, records management, digital assets management

Unit III: Digital Library
Definitions, Fundamentals and Theoretical Aspects; Characteristics of Digital Libraries
and nature of Digital Library collections
Major Digital Library Initiatives
Design and Organisation of Digital Libraries: Architecture, Interoperability, Protocols
and Standards; User Interfaces
Unit IV: Digital Resource Management
Digital content creation: Electronic documents, files & formats & conversion to PDF
Digital Resources Management; Access to and Use of Digital Libraries
Digital Storage, Archiving and Preserving Digital Collections
Digital Libraries Technology: Digital Software - D-Space, E-Prints, GSD

Information Literacy Applications in LISL
Unit I: Fundamental of Information Literacy
Information Society and Information Literacy
Information Literacy: Definition, Models and Standards
Information Literacy: Strategic Plan
Information Literacy and Lifelong Learning
Unit II: Information Literacy Programmes and Methodology
Scope of Information Literacy Programme
National and International Programmes in Information Literacy
Implementation of Information Literacy
Information Literacy Products: Library Brochure, Database Brochure, Web based
Access Instructions, Information Bulletin
Unit III: Application of Information Literacy
Application of Information Literacy in Library and Information Centres
Information Literacy for Users
Information Literacy for Professionals
Information Literacy for Research and Development
Unit IV: Trends in Information Literacy
Web based Information Literacy System
OPAC Information Literacy System
Life Long Learning System
Designing of Information Literacy Programme

Unit I: Basics of Information Retrieval Systems
Definition, Components and Types of ISAR Systems
Elements of File Organisation
Artificial Intelligence and Expert System
Information Retrieval Models
Unit II: Subject Representation and Indexing Languages
Alphabetical Subject Representation
Contributions of Cutter, Kaiser, Ranganathan and Coates
Characteristics of Indexing Languages
Vocabulary Control-List of Subject Headings and Thesaurus
Unit III: Indexing Systems and Techniques
Assigned Indexing vs Derived Indexing
Assigned Indexing Systems: Pre-Coordinate (PRECIS, POPSI and Chain Indexing) and
Post-Coordinate Indexing System (Uniterm Index System)
Derived Indexing Systems: Title based (KWIC, KWOC and KWAC), Citation based

(SCI, SSCI, etc.) and Full-Text (STAIRS, LEXIS-NEXIS, etc.)
Automatic Indexing: COMPass
Unit IV: Information Searching and Evaluation
Search Methods and Search Strategy, Boolean Search
Information Searching in different Media: Print and Electronic
and Parameters of Evaluation - Retrieval Performance: Recall and Precision

Public Library and Information System

Unit I: Public Libraries and their Development
Objectives and Functions
History and Development of Public Libraries in India
History and Development of Public Libraries in Abroad
Role of Government and agency for the promotion and development of Public Libraries
in India
Unit II: Collection Development and Management
Books and Periodicals
Conference Literature, Grey Literature and Government Publications
Non-Book Materials: Electronic-Resources and Databases
Manuscripts
UNIT III: Library Organization and Services
Organizational Structure of Public Library
Staff Manual, Library Surveys, Statistics and Standards, etc.
CAS, SDI, Abstracting and Indexing Services, Library Bulletin, Newspaper Clipping
Services
Resource Sharing and Networking
UNIT IV: Financial and Human Resource Management
Determination of Finance, Sources of Finance
Types of Budget
Nature, Size, Selection, Recruitment, Qualification and Training
Responsibilities and Duties
Competency Development Case Study of Public Library in India

Academic Library and Information System

Unit I: Academic Libraries and their Development
Objectives and Functions
History and Development of Academic Libraries in India
History and Development of Academic Libraries in Abroad
UGC and its Role in the Development of College and University Libraries
Unit II: Collection Development and Management
Books and Periodicals
Conference Literature, Grey Literature and Government Publications
Non-Book Materials: Electronic-Resources and Databases
Unit III: Library Organization and Services
Organizational Structure of Academic Library
Staff Manual, Library Surveys, Statistics and Standards, etc.
CAS, SDI, Abstracting and Indexing Services, Library Bulletin, Newspaper Clipping

Services
Resource Sharing and Networking
Unit IV: Financial and Human Resource Management
Determination of Finance, Sources of Finance
Types of Budget
Nature, Size, Selection, Recruitment, Qualification and Training
Responsibilities and Duties
Competency Development Case Study of Academic Library in India

Research and Technical Library and Information System

Unit I: Research and Technical Libraries and their Development
Objectives, Functions, and Development of Research and Technical Library in India
History and Development of Research and Technical Library in Abroad
Promotion and Development of Research and Technical Library in India
Research and Technical Libraries and its Relationship with Parent Organization
Unit II: Collection Development and Management
Books and Periodicals
Conference Literature, Grey Literature and Government Publications
Non-Book Materials: Electronic-Resources, Databases
Unit III: Library Organization and Services
Organizational Structure of Research and Technical Library
Staff Manual, Library Surveys, Statistics and Standards, etc.
CAS, SDI, Abstracting and Indexing Services, Library Bulletin
Resource Sharing and Networking
Unit IV: Financial and Human Resource Management
Determination of Finance, Sources of Finance
Types of Budget
Nature, Size, Selection, Recruitment, Qualification and Training
Responsibilities and Duties
Competency Development Case Study of Research and Technical Library in India

Health Science Library and Information System

Unit I: Health Science Libraries and their Development
Objectives and Functions
History and Development of Health Libraries with Special Reference to India
History and Development of Health Libraries with Special Reference to AbroadMedical
Libraries Information Policies in India
Unit II: Collection Development and Management
Books and Periodicals
Conference Literature, Grey Literature and Government Publications
Non-Book Materials: Electronic-Resources
Databases
Unit III: Library Organization and Services
Organizational Structure of Medical Libraries
Staff Manual, Library Surveys, Statistics and Standards, etc.
CAS, SDI, Abstracting and Indexing Services, Library Bulletin

Resource Sharing and Networking
Unit IV: Financial and Human Resource Management
Determination of Finance, Sources of Finance
Types of Budget
Nature, Size, Selection, Recruitment, Qualification and Training
Responsibilities and Duties
Competency Development Case Study of Health Libraries in India

Preservation & Conservation of Library Materials

Unit I: Basics of Preservation and Conservation: Overview
Preservation and Conservation: Historical Development, Need and Purpose
Preservation of Print Materials: Books, Periodicals, Pamphlets
Digital Preservation
Unit II: Preservation of Non-Print Materials
Palm Leaves
Manuscripts
Films
Pen Drive, DVD
Unit III: Hazards and Control Measures to Library Materials
Environmental Factor (Temperature, Humidity, Water, Light, Air Pollution, Smoke, Dust, etc)
Chemical Factors
Biological Factors
Unit IV: Binding
Types of Binding of Library Materials
Binding Material and their Varieties
Binding Process
Standards for Library Binding

Knowledge Management

Unit I: Basics of Knowledge Management
Basics of Knowledge
Types of Knowledge: Explicit Knowledge and Implicit Knowledge
 Scope of Knowledge Management
Knowledge Management Cycle
Unit II: Knowledge Management: Creation & Tools
Knowledge Creation, Access, Transfer and Sharing
Knowledge Tools
Knowledge Networks
Knowledge in Decision Making
Unit III: Pre-requisites of Knowledge Management
Sharing of Expertise
Knowledge Mapping
Knowledge Worker
Unit IV: Trends and Challenges of Knowledge Management
KM Initiatives in Indian Organization
Software for Knowledge Management

Pioneers in Knowledge Management
Advances in Knowledge Management

Informetrics

Unit I : Informetrics
Genesis, scope and definition
Librametry,Bibliometrics
Scientometrics
Webometrics
Unit II : Bibliometrics Laws
Classical Bibliometrics laws: Zip's law, Lotka's law, Bradford's Law of Scattering;
Generalized Bibliometrics distributions.
Fitting of Informetrics models : Bradford's Curve, Leimukuhler's Distribution.
Aspects of concentration measures; 80-20 rule, Price's Law relating to scientific
productivity Analysis of use statistics.
Unit III : Growth and Obsolescence of Literature
Various growth models;
Aging factor and half life: real vs. apparent
synchronous vs. diachronous.
Unit IV : Citation analysis and Science Indicators
Bibliographic Coupling and Co-citation Analysis
Science indicators: Impact factor, h-index, g-index, i-10
Mapping of Science

Information Resource Development

Unit I: Types of Information Resources
Documentary (Primary, Secondary & Tertiary)
Non-Documentary
E-Resources
Unit II: Book Selection Principles
Drury's Principle
Dewey's Principle
McColvin's Principle
Ranganathan's Principle
Unit III: Selection Tools
Current List, Bibliographies
Library Catalogue
Books in Print
Publishers' Catalogue, Directories, WebOPAC (WorldCat), Websites
Unit IV: Categories of Documents
 Physical Characteristics
By Information Characteristics
Books and Periodicals, Theses and Dissertations
Govt. Publications, Grey Literature

Research and Publication Ethics

Unit I: Philosophy and Ethics
 Introduction to philosophy: definition, nature and scope, ,
branches
Ethics: definition, moral philosophy, nature of moral judgements and
reactions
Unit II: Scientific Conduct
Ethics with respect to science and research
Intellectual honesty and research integrity
Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP)
Redundant publications: duplicate and overlapping publications, salami
slicing
Selective reporting and misrepresentation of data

Unit III: Publication Ethics
 Publication ethics: definition, introduction and importance
 Best practices / standards setting initiatives and guidelines: COPE,
WAME, etc
 Conflicts of interest
 Publication misconduct: definition, , problems that lead to
unethical behavior and vice versa, types
 Violation of publication ethics, authorship and contributorship
 Identification of publication misconduct, complaints and appeals
 Predatory publishers and journals
SECTION (B): Research and Publication Ethics (Practice) 50
Marks
Unit IV: Open Access Publishing
 Open access publications and initiatives
 SHERPA/RoMEO online resource to check publisher copyright & self
archiving policies
Software tool to identify predatory publications developed by SPPU
 Journal finder / journal suggestion tools viz. JANE, Elsevier Journal
Finder, Springer Journal Suggester, etc.
Unit V: Publication Misconduct
A. Group Discussion
 Subject specific ethical issues, FFP, authorship
 Conflict of interest
 Complaints and appeals: examples and fraud from India and abroad
B. Software Tools
 Use of plagiarism software like Turnitin, Urkund & other open source
software tools.
Unit VI: Databases and Research Metrics
A. Databases
 Indexing databases
 Citation databases: Web of Science, Scopus, etc.

B. Research Metrices
 Impact factor of Journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score
 Metrices: h-index, g index, i10 index, altmetrics

Research Methodology

Unit I: Foundations of Research and Research Design
Meaning, and Process of Research
 Types of Research: Fundamental and Applied
 Research Design, Types of Research Design
 Designing Research Proposal, Literature Search and Literature Review
Unit II: Research Methods
 Types of research: Qualitative and quantitative method of LIS research
 Scientific Method
Historical Method, Survey and Case Study Method
 Experimental Method
Unit III: Data Analysis and Interpretation
 Data Collection Techniques: Questionnaire, Interview, Observation, Sampling and Delphi
 Presentation of Data-Tables, Charts and Graphs
Interpretation of Data: Frequency Distribution, Measures of Central Tendency, Analysis of Time Series, Co-relation Studies and Analysis of Variance
 Use of Statistical Packages
Unit IV: Statistics and its Applications
 Descriptive Statistics – Measures of Central Tendency: & Dispersion, Correlations and linear regression, Chi-Square test, t-test, z-test, f-test.51 52
 Presentation of Data: Tabular, Graphic, Bar Diagram and Pie Chart, etc. Report Writing Statistical Packages – MS-Excel, SPSS, and Web-based Statistical Analysis Tools, etc.
 Plagiarism- Self plagiarism, anti-plagiarism guidelines and software

Knowledge Management

Unit I: Basics of Knowledge Management
 of Knowledge
 Types of Knowledge: Explicit Knowledge and Implicit Knowledge
 and Scope of Knowledge Management
 Knowledge Management Cycle
Unit II: Knowledge Management: Creation & Tools
 Knowledge Creation, Access, Transfer and Sharing
 Knowledge Tools
 Knowledge Networks
 Knowledge in Decision Making
Unit III: Pre-requisites of Knowledge Management
 Sharing of Expertise

Knowledge Mapping
Knowledge Worker
Unit IV: Trends and Challenges of Knowledge Management
KM Initiatives in Indian Organization

Software for Knowledge Management
Pioneers in Knowledge Management
Advances in Knowledge Management

DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
SCHOOL OF SOCIAL SCIENCES

PhD

CWLIS-1: Research Methodology
Unit 1 Basics of Research (15 hrs)
Concept, Meaning, types, trends, design. ethics for research.
Formulation of research problem and hypotheses.
Research reporting-contents, formats, guidelines.
Style manual and reference management tools.

Unit 2 Research Methods and Tools (15 hrs)
Types of Research
Research Methods
Data Collection- Tools and Techniques
Sampling Techniques and their applications

Unit 3 Data Analysis Techniques (15 hrs)
Data Analysis and Interpretation
Quantitative Methods
Test of Significance, Statistics: t- Test, X 2 - Test, ANOVA etc.
Computer Applications- MS-Office, SPSS etc.

Unit 4 LIS Research (15 hrs)
Nature, Significance, Levels, Opportunities and Sponsorship
Thrust and Emerging Issues
Research output and its communication
Issues, Challenges and trends in India
Library System
Unit 1 Perspective of Library System (15 hrs)
Fundamentals of library
Library Systems
Changing perspective of Library in Education system
Implications for the development of library system.

Unit 2 Public Library System (15 hrs)
Basics of Public Library
Services governance, functions, modernization and trends
Collections, users, finance and management
Legislative support for Public Library

Unit 3 Academic Library System (15 hrs)
Fundamentals of Academic Library
Types, levels and services
Governance, functions, users and finance,
Management trends and modernization

Unit 4 Special Library System (15 hrs)
Foundation of Special Library
Levels, characteristics and services
Governance, grievances, users and finance
Management trends and modernization
ICT Applications in Libraries
Unit 1. Fundamental Concepts. (15 hrs)
Basics of ICT tools
Trends and Developments
ICT in Knowledge Society
Disruptive Technology

Unit 2. ICT applications in Libraries (15 hrs)
Local, national & global perspectives
Place of ICT in Libraries
Role in Library Modernization
Issues, Challenges and Trends

Unit 3. Digital Library System (15 hrs)
Digitization and Digital Library
Software for Digital Library Development
Digital collection and archiving
Institutional Repositories

Unit 4. Emerging Trends (15hrs)
Smartphone applications
Social Networking Sites and Websites
Subject Gateways and OSS
Cloud computing
LIS Education
Unit 1. Foundation of LIS Education (15 hrs)
Origin, Growth and Development
Sociology of LIS Education.
 Trends in Library and Information Science Education.
LIS Education in India and its trends

Unit 2. Curriculum and Courses (15 hrs)
Different levels of Courses and Curricula
Blending Tradition with technology
Objectives and outcomes
Multidisciplinary approach

Unit 3. Teaching techniques and evaluation (15 hrs)
Innovative Techniques
ICT Integration
Traditional Methods
Evaluation Programme

Unit 4. Faculty development (15 hrs)
Capacity and Competency Building
Faculty Development Programme
Continuing Education for Faculties
Training Facilities in India

Library Management
Unit 1. Management thoughts (15 hrs)
Basics of Management
School of Management Thoughts

Comparative analysis of recent managerial philosophies
Trends in Library Management

Unit 2. Personal and Financial Management (15 hrs)
Basics of Personal Management
Job analysis, description and evaluation
Basics of Financial Management
Principles, types and resource mobilization

Unit 3. Management of Information Resources (15 hrs)
Nature of Information Resources
General management principles of information resources
E-resources management
Delivery of information resources

Unit 4. Collection Development Policy (15 hrs)
Basics, concepts, formulation and types
Planning for collection development
Cooperative collection development-trends and challenges
Collection evaluation and Review.

Trends in Bibliometrics
Unit 1. Basics of Bibliometrics (15 hrs)
Meaning concepts and definition
From Librametry to Bibliometrics
Bibliometrics in LIS Research
Changing Dimensions in Bibliometric Studies

Unit 2. Laws of Bibliometrics (15 hrs)
Classical Laws of Bibliometrics
Application of Bibliometric Laws
Laws of Scientific Productivity
Concentration Measures

Unit 3. Trends in Metric studies (15 hrs)
Informetrics
Scientometrics
Webometrics
Altametrics

MASTER OF LIBRARY AND INFORMATION SCIENCE (MLIS) TWO

Foundation of Librarianship and Information Studies
Unit I: Fundamentals of Librarianship (1 Credit/ 15 Teaching Hours)
Library- Genesis, History, Functions, Objectives and Movement
Modern Concept of Library
Roles of Library in Contemporary Society
Types of Library- Public, Academic Special and National

Unit II: Principles, Laws and Legislations (1 Credit/ 15 Teaching Hours)
Normative Principles and Laws of Library Science
Legal Deposit, Delivery of Book Acts, Copy Right Act
Model Library Act

Library Legislations in India with reference to North East India and Manipur

Unit III: Associations and Institutions (1 Credit/ 15 Teaching Hours)
International- IFLA, UNESCO, READ Global, Bill and Melinda Gates Foundation, etc.

National- ILA, IASLIC, SLA, ALA, CILIP, RRRLF, IPLM, etc.

Regional- North Eastern States

Study of Library Associations and Institutions in Manipur

Unit IV: Professionalism (1 Credit/ 15 Teaching Hours)
Basics of professionalism- Meaning, Concept, Scope

Library and Information Science Profession

Professional Ethics- Concept, Definition, and Characteristics, Standards

Professional Skills and Capacity Building

Information and Knowledge Resources
UNIT 1: Basics of Information and knowledge resources (1 Credit/ 15 Teaching Hours)
Meaning, Concept, Need and Scope

Origin, Growth and Development

Types, Characteristics, Utilization and Limitations.

Evaluation and Guidelines for Evaluation.

UNIT 2: Documentary Resources (1 Credit/ 15 Teaching Hours)
Meaning, Scope, Types and Characteristics

Primary Information Resources

Secondary Information Resources

Tertiary Information Resources

UNIT 3: Non-Documentary Resources (1 Credit/ 15 Teaching Hours)
Meaning, Scope, Types and Characteristics

Human Resources

Organisational/ Institutional Resources

E-Resources- Computerized databases, Multimedia, Web based.

UNIT 4: Information Resources by subjects (1 Credit/ 15 Teaching Hours)
Information Resources in Science and Technology

Information Resources in Social Sciences

Information Resources in Humanities

Multidisciplinary Information Resources

Classification Theory
Unit I: Fundamentals of Knowledge Organisation (1 Credit/ 15 Teaching Hours)
Knowledge Organisation-Concepts, Tools and Methods

Universe of Knowledge -Structure and Development, Modes of Subject Formation

Normative principles and Five Fundamental categories

Concepts of call number: Class Number, Book Number and Collection Number

Unit 2: Library Classification (1 Credit/ 15 Teaching Hours)
 Concepts, Meaning, Need, Purpose, Functions and General Theory

 Library Classification: Base for Knowledge Organisation

 Growth and Development of Classification Schemes

 Study of Colon Classification (CC) and Dewey Decimal Classification (DDC)

B: Classification Practice Unit 3: Classification Using CC-6 (1 Credit/ 30 Teaching Hours)
 Simple and Compound Subjects

Unit 4: Classification Using DDC-23 (1 Credit/ 30 Teaching Hours)
 Simple and Compound Subjects

Cataloguing Theory
Unit 1: Fundamentals of Library Cataloguing (1 Credit/ 15 Teaching Hours)
 Library Catalogue: Definition, Objectives, Needs and Functions

 Cataloguing as Base for Knowledge Organisation and Retrieval

 Library Catalogue Codes: History, Growth, Development and Trends

 Physical Forms and Types of Catalogues, Types of Catalogues, Kinds of Entries

Unit 2: Entries, Filing and Subject Cataloguing (1 Credit/ 15 Teaching Hours)
 Data Elements and Types of Entries

 Subject cataloguing-Concept, Meaning, Purpose, Approaches and Trends

 Chain Indexing and Sears List Subject Headings

 Salient Features of CCC-5 and AACR-2R

B: Cataloguing Practice Unit 3: Cataloguing using Classified Catalogue Code, 5th edition (1 Credit/ 30 Teaching Hours)
 Resources having Single Authorship

 Resources having Shared Responsibilities

 Resources with Editorial Directions and Corporate Authorship

 Derivation of Subject Index through Chain Procedure
Unit 4: Cataloguing Using AACR – 2R (1 Credit/ 30 Teaching Hours)
 Resources having Single Authorship and Shared Responsibilities

 Resources with Editorial Directions

 Corporate Authorship

 Assignment of Subject Heading as per Sear List of Subject Headings

ICT Fundamentals of LIS
Unit 1: Basics and Fundamentals of ICT (1 Credit/ 15 Teaching Hours)

 Computer System-Generation, Classification, CPU, Input, Output

 Number systems, Character Representation - ASCII, UNICODE

 Hardware and Accessories- Input / Output Devices, Optical Devices- CD, DVD, Storage and Memory

Unit 2: Operating System and Software (1 Credit/ 15 Teaching Hours)
Meaning, Types and Functions of Operating System

System Software and Application Software

Programming Language, Scripting Languages, DBMS, RDBMS, Models of DBMS

Algorithm, Flow Chart and data Structure

Unit 3: **Telecommunication Technology and Networks (1 Credit/ 15 Teaching Hours)**
 Basics of telecommunication Technologies

 Data communication and Data/Information Security

Network Types and Topologies, LAN, MAN and WAN.

Hardware Requirements for setting up of LAN

Unit 4: ICT in LIS (1 Credit/ 15 Teaching Hours)

History, Need, importance, purpose, role and significance

ICT Based Library and Information System

Areas of Applications in LIS

Library Transformation and ICT

Information Systems & Services

also able to provide information services to the library patrons in different environment. **Unit 1**: **Basics of Information Systems (1 Credit/ 15 TeachingHours)**

Meaning, Definition, Scope

Nature and Characteristics

Kinds and Categories of Information System

Data Centres, Data Banks

Unit 2: Information Systems and Programmes (1 Credit/ 15 Teaching Hours)

Characteristics, Structure, functions, products and services of Information Systems

Global Information System- INIS, AGRIS, BIOSIS, MEDLARS

National Information System - UK, USA, India (NISCAIR, NISSAT, DESIDOC, DRTC, etc.);

Regional Information System- SAARC, PADIS.

Unit 3: Information Services (1 Credit/ 15 Teaching Hours)

Meaning, Definition, Scope, Need and Characteristics

Conventional Services, Reference, Translation and Referral and Alerting Services

Digest Service, Rural Base Services, Translation Service

E-based Services, Document Delivery Services, Reprographic Services

Unit 4: Systems and Services in Network Environment (1 Credit/ 15 Teaching Hours)

Meaning, Characteristics, Functions and Nature of Services

Services under Library Co-operation

Services under Resource Sharing and Consortia

Services under DELNET, INFLIBNET, INDEST.

Management of Library and Information System
Unit 1: Fundamentals of Management (1 Credit/ 15 Teaching Hours)

Management: Concept, Definition, Needs, and Functions

Schools of Management Thought

Management by Objectives (MBO), Organisational Structure

Principles of Management

Unit 2: Library Housekeeping Operations (1 Credit/ 15 Teaching Hours)

Different Sections of Library - Routine Functions

Collection Development- Policies, methods, procedure and Trends in Acquisition

Technical Processing, Serial Control, Circulation Methods

Shelving, Maintenance, Stock verification, Archiving and Disaster Management

Unit 3: Library Governance (1 Credit/ 15 Teaching Hours)

Human Resource Management- Manpower Planning

Financial Management: Concept, Principles and Types and Resource Mobilisation

Library Committee- Need, Role, Types, Rules and Regulations and Functions

Job Analysis, Job Description and Job Evaluation

Unit 4: Planning and Performance Evaluation (1 Credit/ 15 Teaching Hours)
Planning: Concept, Need and Levels

Performance Appraisal, Annual Report, Statistics

SWOT Analysis, PERT/CPM Techniques

Total Quality Management (TQM), Change Management

Classification Theory
Unit 1: Fundamentals of Library Classification (1 Credit/ 15 Teaching Hours)
Planes of Work, Canons, Postulates

Facet Analysis and Facet Sequence

Phase Relation, Common Isolates

Devices and Mnemonics

Unit-2 Study of Classification Schemes (1 Credit/ 15 Teaching Hours)
Notation – Meaning, definition, qualities and types

Mapping of subjects in Classification- Structure and Techniques

In-depth study of DDC

In-depth study of UDC

B: Classification Practice Unit-3 Classification Using DDC (1 Credit/ 30 Teaching Hours)
Classification of Compound and Complex subjects

Unit-4 Classification using UDC (1 Credit/ 30 Teaching Hours)
Classification of Compound and Complex subjects

Knowledge Organization
Unit 1: Standardisation in Cataloguing (1 Credit/ 15 Teaching Hours)
Meaning, Need and Purpose of standardisation

Bibliographic Standards: ISBD, CCF, ISO-2709 and Z39.50

Metadata Standards in MARC-21 and Dublin Core

Emerging Trends in Standardisation-RDA

Unit 2: Study of Cataloguing Codes and Trends (1 Credit/ 15 Teaching Hours)
Study of AACR-2R, MARC-21

Features of RDA

Cooperative Cataloguing- OCLC, LC, CORC (Cooperative Online Resource Cataloguing)

Web Based Cataloguing-OPAC, WEBOPAC and Co-OPAC

B: Cataloguing Practice Unit 3: Cataloguing Using AACR – 2R (1 Credit/ 30 Teaching Hours)
Periodicals, Manuscripts, Cartographic Materials; Microforms, Graphic Materials

Unit 4: Cataloguing Using MARC-21 (1 Credit/ 30 Teaching Hours)
Simple and Compound Materials
Information Consolidation, Repackaging & Retrieval
Unit 1: Information Retrieval System (1 Credit/ 15 Teaching Hours)
Meaning, Definition, Components

Indexing – Concept, Methods and Systems

Pre-Coordinate and Post-Coordinating Indexing

Precis and POPSI

Unit 2: Indexing Language Vocabulary Control (1 Credit/ 15 Teaching Hours)
Indexing Languages: Basic Concepts, Types and Characteristics

Automatic Indexing (KWIC and KWAC)

Vocabulary Control- Definition, tools and devices

Thesaurus-Importance, Structure, Function and design

Unit 3: Information Retrieval Models (1 Credit/ 15 Teaching Hours)
IR Models: Concept, purpose and need

IR: Process and Techniques, Basic Retrieval methods, Manual and automated
Search Strategies and techniques, Boolean logic, Cognitive, Fuzzy and Probabilistic

Evaluation of IR Systems, Purpose and Criteria for evaluation

Unit 4: Abstracting, Repackaging and Consolidation (1 Credit/ 15 Teaching Hours)
Abstract and Abstracting- Concept, Meaning, Types & guidelines in preparing Abstract

Information Repackaging-Concept, meaning, utility, and types

Information Consolidation- Concept, meaning, utility, and types

Information repackaging and consolidation products and services

Research Methodology in LIS
Unit 1: Concept of Research (1 Credit/ 15 Teaching Hours)
Research: Concept, Need and Purpose

Types of Research-Qualitative, Quantitative and Multidisciplinary

Research Problem and Research Design

Hypothesis: Definition, Types, Sources and Functions

Unit 2: Research Methods, Techniques and Tools (1 Credit/ 15 Teaching Hours)
Methods-Historical, Survey, Experimental, Scientific, Observation, Delphi and Case Study

Applied and Fundamental Research- Meaning, Concept and Need

Sampling Techniques

Data Collection Tools- Questionnaire, Interview, Observation, Schedule and Check-list

Unit 3: Data Analysis and Interpretation (1 Credit/ 15 Teaching Hours)
Measures of Central Tendency, Dispersion, Variables, Correlations and regression

Testing of Hypothesis using Chi-Square test, t-test, z-test, F-test.

Presentation of Data: Tabular, Graphic, Bar Diagram and Pie Chart, etc.

Using Statistical Packages – MS-Excel, SPSS, and Web-based Statistical Analysis Tools

Unit 4: LIS Research, Metric Studies and Reporting (1 Credit/ 15 Teaching Hours)
LIS Research in India and abroad - History, Development and Trends

Metric studies – From Librametrics to Webometrics

Style Manuals: Citations/ References, Tools, Manuals and Plagiarism

Research Reporting: Structure, Style and Contents

Information Communication in Knowledge Society
Unit 1: Data, Information and Knowledge (1 Credit/ 15 Teaching Hours)
Objective, Meaning, Nature, Characteristics, Scope, Type and Properties

Differences and Relationship in Knowledge Spectrum

Roles in Research and Development Activities

Contributions in Societal Development

Unit 2: Information Communication (1 Credit/ 15 Teaching Hours)
Information Generation and Communication- Modes and Impact of Information Technology

Information Transfer Chain,

Channels of Communication

Barrier to Information Communication, Diffusion Models

Unit 3: Information and Knowledge Society (1 Credit/ 15 Teaching Hours)

From Agrarian to Knowledge Society

Genesis, Nature and Characteristics of Information Society

Genesis, Nature and Characteristics of Knowledge Society

Human Intellectual Capital, Knowledge Product and Knowledge Economy

Unit 4: Intellectual Property Rights (IPR), National Information Policy (NIP) (1 Credit/ 15 Teaching Hours)

IPR-Concept, Genesis, Development and Trends

Categories of IPR, Acts, Role of WIPO, Copyright Laws, and Emerging Issues

NIP- NAPLIS, National Policy on University Library, RTI and IT Act

National Knowledge Commission (NKC), Open Access Initiatives (OAI)

ICT Applications in LIS (Theory)
Unit 1: Library Automation (1 Credit/ 15 Teaching Hours)

Meaning, concept, areas and scope

Planning, Design and Implementation - Process and Procedures

Automation of Housekeeping Operations

Automatic Identification methods Barcode, RFID

Unit 2: Software Packages (1 Credit/ 15 Teaching Hours)

Integrated Library Management Software (ILMS)

Features of Commercial, Freeware and Open Source Software

Request for Proposal (RFP) \

Evaluation and Selection of ILMS

Unit 3: Digital Library (1 Credit/ 15 Teaching Hours)

Genesis, Meaning, Definition, Objectives, Characteristics and Advantages

Digitization- Concept, Purpose, process, Planning

File Formats-Image format, Audio and Video Format

Digital Rights Management

Unit 4: Developing Digital Library (1 Credit/ 15 Teaching Hours)

Digital Library Initiatives in India and Abroad

Institutional Repository Vs Digital library

Building a Digital Library-Planning and Implementation

Features of Softwares-GSDL, DSpace, E-Prints

ICT Applications in LIS (Practice)

The students are given an intensive exposure to the operation and handling of the following Packages:

    Study of Library Automation Software (Teacher designs the aspects to be studied)

    SOUL2.0 and other Library Software like KOHA.

    Digital Library Software- DSpace and GSDL

The examiner at the end tests the awareness of the students and conduct viva-voce test.

Library Systems Study
Part A: Theory (50 marks, 2 Credits) Unit-1: Understanding System (1 Credit/ 15 Teaching Hours)

General Systems Theory

System Life Cycle

System Analysis and Design

Tools, Techniques, Approaches, Cost, Evaluation

Unit-2: Library System Analysis, Design and Evaluation (1 Credit/ 15 Teaching Hours)

Systems Approach to Library

Study of Library as a System

Analysis and Design of Library system

Evaluation of Library System

Unit 4. Metric Applications (15 hrs)
    Citation Studies
    Impact Factor
    Web Impact Factor
    University/Institutional Ranking.

Users Study and Information Literacy
Unit 1. Information Users (15 hrs)
    Meaning psychology and identification
    Categories and levels
    Characteristics of users
    As consumer and disseminator of information.

Unit 2. Users Needs (15 hrs)
    Information Needs and its Models
    Information seeking Behaviour
    Users in different information environment
    Contribution of Mensal, Paisley, Allan, etc.

Unit 3. **Users Study (15 hrs)**
    Origin, development and trends
    Different generations on user study
    Landmark and Benchmark studies
    Methods. Tools and Techniques

Unit 4. Information Literacy (15 hrs)
    objectives and areas
    Application in Library and Information Centres
    Guidelines and Standards
    Models of Information Literacy

PHILOSOPHY AND ETHICS (3 hrs)
    Introduction to philosophy: definition, nature and scope, concept, branches
    Ethics: definition, moral philosophy, nature of moral judgements and reactions

Unit- 2: SCIENTIFIC CONDUCT (5 hrs)
    Ethics with respect to science and research
    Intellectual honesty and research integrity
    Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP)
    Redundant publications: duplicate and overlapping publications, salami slicing
    Selective reporting and misrepresentation of data

Unit- 3: PUBLICATION ETHICS (7 hrs)
    Publication ethics: definition, introduction and importance
    Best practices/standards setting initiatives and guideline: COPE, WAME, etc.
    Conflicts of interest
    Publication misconduct: definition, concepts, problems that lead to unethical behaviour and vice versa, type
    Violation of publication ethics, authorship and contributor ship
    Identification of publication misconduct, complaints and appeals
    Predatory publishers and journals

PRACTICE
Unit- 4: OPEN ACCESS PUBLISHING (04)
   Open access publications and initiatives
   SHERPA/ROMEO online to cheek publisher copyright & self-archiving policies
   Software tool to identify predatory publications developed by SPPU
   Journal finder/journal suggestion tools viz JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.

Unit- 5: PUBLICATION MISCONDUCT (4 hrs)
A. Group Discussions (2 hrs)
   Subject specific ethical issues, FFP, authorship
   Conflicts of interest
   Complaints and appeals: examples and fraud from India and abroad
B. Software tools (2 hrs)
   Use of plagiarism software like Turnitin, Urkund and other source software tools

Unit 6: DATABASES AND RESEARCH METRICS (7 hrs)
A. Databases (4 hrs)
   Indexing databases
   Citation databases: Web of Science, Scopus, etc.
B. Research Metrics (3 hrs)
Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score
Metrics: h-index, g index, i10 index, Altmetrics

Web Technology
Unit 1: Basics of Web Technology (1 Credit/ 15 Teaching Hours)
 Introduction to Web Technology, Meaning and applications

 HTML: Basics, Hypertext, Hypermedia, HTML Programming

 Web browsers, Search Engines, Directory, Portals, ISPs

 World Wide Web, Web Servers, Proxy Servers, Domain Name Servers

Unit 2: Internet and Its Connectivity (1 Credit/ 15 Teaching Hours)
 Internet Connectivity, Dial Up, Leased Line, ISDN, Wi-Fi

 Internet protocols-HTTP, HTTPS, FTP

 Remote Login, OAI-PMH

 Web 2.0., Lib 2.0, Web Security

Unit 3: Web Site Development (1 Credit/ 15 Teaching Hours)
 Websites, URL, Weblogs/Blogs

 Web Page Design and Its Principles

 Hyperlinks and Their design
Unit 4: Web Based Services (1 Credit/ 15 Teaching Hours)
 E-mailing, Discussion Board, Chat & instant message

 Conferencing-Audio and Video,

 Social Networks and Wikipedia

 Web Based resources and other services
Users and User Study
Unit 1: Understanding Users and Their Needs (1 Credit/ 15 Teaching Hours)
 Identifying users and psychology

 Categorization of user-Potential, habitual and professional groups

Information needs of users-Levels, kinds, affecting factors, dynamics

 Models of Information Needs

Unit 2: Behaviour of Users (1 Credit/ 15 Teaching Hours)
Theories of Information Seeking

Information Seeking Behaviour

Users in different Information Environment

Contributions of Mensal,Paisley, T.J. Allen, Dervin, Crane and others.

Unit 3: User Studies (1 Credit/ 15 Teaching Hours)
Origin, development and evolution of user studies

The first-generation studies- their characteristics, contributions and limitations;

The second-generation user studies-Their characteristics and contributions,

Landmark and bench mark studies and Usage studies.

Unit 4: Methods and Tools in Users Studies (1 Credit/ 15 Teaching Hours)
Quantitative and Qualitative Methods

Survey, Experimental, Questionnaire, Interview and other traditional methods

Participant observation, Diary method, time-line series method of Dervin and others

Use of psychometric methods

Preservation and Conservation of Information Resources
Unit 1: Basics of Preservation and Conservation (1 Credit/ 15 Teaching Hours)
Concept, Meaning, Need, Purpose, Measures & Trends
Historical development of writing materials

Different information resources and their nature and preservation

Preservation and Conservation measures

Unit-2: Hazards to Information Resources (1 Credit/ 15 Teaching Hours)
Environmental factor

Biological factor

Chemical factor

Disastrous factor

Unit-3: Preservation Techniques (1 Credit/ 15 Teaching Hours)
Binding

Safety and Security measures

Use of Chemicals

Disaster management

Unit-4: Conservation Techniques (1 Credit/ 15 Teaching Hours)
Repairing of materials

Microfilming

Digitisation

Digital Archiving

Metric Studies in LIS
Unit 1: Basics of Metric Study (1 Credit/ 15 Teaching Hours)
Meaning, Concept, Scope, Need

From Librametry to Bibliometrics, Generalised bibliometric distributions

Classical Bibliometric Laws**:** Zipf"s Law, Lotka"s Law, Bradford Law

Bibliographic Coupling, Bradford"s Curve

Unit 2: Growth and obsolescence of literature (1 Credit/ 15 Teaching Hours)
Growth of Literature and growth models

Obsolescence Study-the half-life analogy, determination of aging factor and half-life, real vs apparent, synchronous and diachronous.

Aspects of concentration measures, 80-20 Rules

Laws of scientific productivity

Unit-3: Citation Studies (1 Credit/ 15 Teaching Hours)
Meaning, Concept, Scope and Trends

Citation Study

Citation Analysis

Impact factors

Unit 4: Trends in Metric studies (1 Credit/ 15 Teaching Hours)
Almetrics: Genesis, scope and definitions and applications

Informetrics: Genesis, scope and definitions and applications.

Scientometrics: Genesis, scope and definitions and applications,science indicators and mapping of science.

Webometrics: Genesis, scope and definitions, Web Impact factors, Applications in the Evaluation of Websites and the evaluation parameters.

Marketing of Information Products & Services

Unit 1: Basics of Information Marketing (1 Credit/ 15 Teaching Hours)
Concept, Meaning, Needs and Characteristics

Production, Demand and supply of Information

Distribution of Information

Profit and Non-profit Marketing
Unit 2: Information Products & Services (1 Credit/ 15 Teaching Hours)
Strategic Objectives, Generation and Design

Testing and analysis of commercial feasibility

Test Marketing

Commercialising the products and services

Unit 3: Pricing Models (1 Credit/ 15 Teaching Hours)
Setting the pricing objectives.

Determining demand and estimating costs.

Estimating costs.

Selecting pricing model and adopting pricing strategies.

Unit 4: Marketing Strategies and Planning (1 Credit/ 15 Teaching Hours)
Market Research, Analysis and Segmentation.

Developing Organizational, Controlling and evaluation Skills.

Organisational performance, market audit, implementation and control

Marketing Strategy, Planning and Policy

Collection Development
Unit I: Collection and Its Development (1 Credit/ 15 Teaching Hours)
Nature of library collections

Collection Development –Concept, Meaning, Definitions

Managing library collections

Need, Goals and Methods

Unit 2: Principles and Policies (1 Credit/ 15 Teaching Hours)
Principles by Ranganathan, Drury, Dewey

Collection Development Policies – Concepts, Content, Formulation and Types

Planning for Collection Development

Committees, Staffing, Budgeting, Implementation and Evaluation

Unit 3: Co-operative Collection development (1 Credit/ 15 Teaching Hours)
Reasons, Major barrier and factors

Collection development through co-operation, Resource sharing

Dilemma of Selection, Basic requirements

Selection – Environment, Strategies, Criteria, Procedure, and tools

UNIT 4: Collection Evaluation (1 Credit/ 15 Teaching Hours)
Evaluation- Concept, Meaning, Scope

Methods of Evaluation- User Oriented, Collection Oriented

Stock Verification and Rectification

Weeding of Collection –Concepts, Goals and Methods

Knowledge Management
Unit 1: Introduction to knowledge Management (1 Credit/ 15 Teaching Hours)
Concepts, Definitions and Purpose of KM

Needs and Scope, Historical Development

Role of KM, Impact on Society

Knowledge Management and Document Management.

Unit 2: Knowledge Management Approaches (1 Credit/ 15 Teaching Hours)
Mechanistic Approach

Cultural / Behaviouristic Approach

Systematic Approach

Process and Practice Approach

Unit 3: Information Technology and Knowledge Management (1 Credit/ 15 Teaching Hours)
Knowledge Engineering

Knowledge Networking: Role of Information Professionals in Knowledge Management

Knowledge Workers: their legal and ethical issues

Technology and Knowledge Workers

Unit 4: Knowledge Creation, Transfer and Sharing (1 Credit/ 15 Teaching Hours)
Knowledge Classification, Knowledge creation concept, Knowledge creation process, Nonaka''s Model

Knowledge Architecture: People Core and technical Core

Definition, Needs & Purpose; Knowledge vision & focus; Mentors & Social Networks; Prerequisites for transfer; Transfer Strategies; transfer protocols; knowledge in e-world

Knowledge Management Systems: Decision Support System- Artificial Intelligence.

Information Literacy
Unit 1: Information Literacy (1 Credit/ 15 Teaching Hours)
Meaning, Definition, Concept, Need and Objectives

Areas of Information Literacy

Role of Institution in Information Literacy

Partners of Information Literacy

Unit 2: Types & Application of Information Literacy in Library and Information Centres (1 Credit/ 15 Teaching Hours)
Technology Literacy, Media Literacy, Digital and Computer Literacy etc.
Information Literacy for Users
Information Literacy for Professionals
Information Literacy for Research and Development

Unit 3: Models of Information Literacy in the Library Context (1 Credit/ 15 Teaching Hours)
The Big6, The SCONUL Seven Pillars of Information Skills Model REACTS, The Digital information Fluency model (21CIF), The ANZIL Frame Work

Unit 4: Trends of Information Literacy & Guidelines and Standards for Information Literacy Programmes (1 Credit/ 15 Teaching Hours)
Web based Information Literacy System
OPAC Information Literacy System
Life Long Learning System
UNESCO Information Literacy Indicators.
ALA and ACRL
Standards in Information Literacy (ACRL Information literacy Competency Standards for higher Education)
Information Literacy Instructions in Academic Libraries
Literacy

Community Information Service

Unit1: Understanding Community (1 Credit/ 15 Teaching Hours)
Community-Concept, Meaning and scope
Specific group of communities
Needs of the Communities
Meeting Community Needs

Unit 2: Community Information (1 Credit/ 15 Teaching Hours)
Origin, Meaning, Definition and Scope
Need for Community Information
Information Delivery Mechanisms
Role of Library and Information Systems

Unit3: Community Information Services (1 Credit/ 15 Teaching Hours)
Meaning, Concepts, Need
Types, Scope, Nature
Perspectives in India, UK and USA
Services of Library and Information Systems

Unit 4: Services for the Targeted Community (1 Credit/ 15 Teaching Hours)
Understanding the Target groups
Assessing their Information Needs
Building Capacity, Skills and Competency
Services for the Specific Groups:
 Rural Urban and Metropolitan Communities
 Industrial, Business Communities
 Academic, Research, Institutional and R & D Communities
 Physically/Mentally Disadvantaged Communities
 Children, Women and Senior Citizens

MIZORAM UNIVERSITY

MASTER OF LIBRARY & INFORMATION SCIENCE (MLIS)

FOUNDATION OF LIBRARIANSHIP

Unit 1: Libraries- Concepts, Types, their Role and Development

- Types of Libraries: Features and Functions, Five Laws of Library Science

- Growth &Development of Libraries in UK, USA and India

- Library Extension Services

- Library Legislation, Press and Registration of Books Act, Delivery of Books and Newspapers Act

Unit 2: Professional Associations and Organizations

- Professional Ethics in Librarianship

- Professional Associations: IFLA, ILA, IASLIC, SLA

- Information and Documentation Organizations: UNESCO, NISCAIR, DESIDOC, NASSDOC

FOUNDATION OF INFORMATION SCIENCE

Unit 1: Information and Communication

- Data, Information and Knowledge: Conceptual Difference

- Information Transfer Cycle, Information as Resource

- Communication: Channels, Media, Models and Barriers

- Information Society and National Information Policy

Unit 2: Library and Information Users'

- Information Users': Types and Characteristics

- Information Needs, Information Seeking Behaviour Models

- User Education & User Study

- Electronic/Digital Literacy

PERSONALITY DEVELOPMENT & COMMUNICATION SKILLS

Unit 1: Personality and its Characteristics

- Personality Types, Traits and Characteristics

- Social, Soft and Influencing Skill Development

- Attitude, Appearance, Time and Stress Management Skill

Unit 2: Communication Skill

- Professional Communication Skills (Verbal, Non-Verbal & Written)
- Communication –Understanding the Audience, Presentation, Body Language, Interpersonal Skills and ability to listening Skill
- Technical Communication Skills and Editorial Tools

Unit 3: Marketing Skills & Public Relations

- Marketing Planning and Strategy

- Publicity and Promotion

- Public Relations and Liasoning with Library Authority and Patrons

Unit 4: Leadership and Vision

- Organizational Ability, Team Leadership and Problem Solving

- Project Management, Annual Plan, Five-Year & Perspective Plan, Disaster Management, Conflict and Crisis Management
- Visionary and Futuristic Approach, Preparation of Vision Document
- Negotiation Skills & Strategies

ORGANISATION OF KNOWLEDGE – CLASSIFICATION THEORY

Unit 1: Knowledge Organization
- Universe of Knowledge/Subjects: Nature and Attributes

- Modes of Formation of Subjects

- Knowledge Classification and Library Classification; Static & Dynamic Theories of Classification

Unit 2: Classification Schemes
- Species of Library Classification Schemes

- Salient Features of DDC, UDC, and CC

- Mapping of Subjects in DDC, UDC and CC

Unit 3: Library Classification Theory
- Definition, Need and Purpose of Classification

- Planes, Canons, Principles, Fundamental Categories, Postulates, Facet Analysis and Facet Sequence

- Phase Relation, Common Isolates, Devices, Mnemonics

Unit 4: Notational Techniques and Recent Trends
- Notation: Definition, Types, Functions, Qualities and Techniques

- Design and Development of Classification Schedules

- Recent Trends in Library Classification

ORGANISATION OF KNOWLEDGE – CLASSIFICATION PRACTICE

Assigning Class Numbers representing Simple, Compound, Complex Subjects according to DDC (Latest available edition)

(B) Viva Voce

BASICS OF INFORMATION AND COMMUNICATION TECHNOLOGY

Unit 1: Basics of IT
- IT: Definition, Scope & Components (Hardware & Software)

- Generations of Computers

- Storage Devices, Input & Output Devices, Memory

Unit 2: Operating Systems & Programming Languages
- Operating Systems: Types and Functions

- Study of MS-DOS, LINUX and Windows Operating Systems

- Introduction to Programming Languages

Unit 3: Communication Technology
- Tele-communication: Transmission Media, ISDN, Multiplexing, Switching Technique

- Networking: Topology and Types of Network, Standards & Protocols

- Network Models (OSI), Networking Devices

Unit 4: Database Management System
- Definition, Objectives & Functions

- Types and Elements of DBMS

- Database Structure and Architecture

ICT PRACTICAL
Unit 1: Hands on experience of Windows Operating System
Unit 2: Hands on experience of Linux Operating System
Unit 3: Hands on experience of Application Software
- MS-Word

- MS-Excel

- MS-Power Point

INTRODUCTION TO INFORMATION SOURCES
Unit 1: Information Sources
- Documentary and Non-Documentary Sources (Human & Institutional)
- Reference Sources: Categories, Characteristics and Usefulness
- Evaluation of Reference Sources: Print and Electronic
Unit 2: Electronic Sources of Information
- e-Documents, OPAC, Web-OPAC
- Subject Gateways/Portals, Bibliographical Sources, Full text Databases, Bulletin Boards, Discussion Groups/Forums
- Open Access Resources, List Serves, Social Networking Sites
INTRODUCTION TO INFORMATION SERVICES
Unit 1: Information Services
- Information Services: Definition, Scope, Need and Functions
- Types of Information Services: Reference Service, Referral Service, Bibliographic Service, Translation Service, Indexing & Abstracting Services, Reprographic Service
- CAS/Alerting Service, SDI, DDS
Unit 2: Internet based Information Services
- Library 2.0: Concepts, Characteristics & Components
- Synchronous Communication & Content Delivery: Instant Messaging, RSS
Feeds, Streaming Media, Podcasts, Vodcasts, SMS Enquiry Service
- Collaborative Publishing Tools: Blogs & Wikis
- Collaborative Service Platforms: Social Networks, Tagging, Social Bookmarking

MANAGEMENT OF LIBRARY & INFORMATION CENTRES
Unit 1: Management: Concept and Principles
- Principles of Scientific Management in Libraries and Information Centers

- Elements of Management Process (POSDCORB)

- Total Quality Management, Change Management, Disaster Management, Crisis
Management, Marketing of Library & Information Services

- Project Management- PERT/CPM, SWOT Analysis, MIS, DSS

- Library Committee- Types and Functions

Unit 2: Physical Resource Management and Library Operations
- Library Building: Site, Selection, Planning

- Furniture, Fittings and Equipments: Standards and Specifications
- System Analysis and Design in Library Operations
- Collection Development and Management – Acquisition, Maintenance, Stock Verification, Weeding out Policy and Procedures
- Preservation and Conservation

Unit 3: Human Resource Management
- Organizational Structure
- Job Description and Analysis: Job – Evaluation
- Inter – Personal Relations
- Recruitment Procedures
- Motivation: Group Dynamics
- Training and Development
- Performance Appraisal

Unit 4: Financial Resource Management
- Resource Mobilization and Outsourcing
- Budgeting, Accounting and Auditing
- Budgetary Control

ORGANISATION OF KNOWLEDGE – CATALOGUING THEORY
Unit 1: Cataloguing Principles
- Catalogue: Definition, Objectives, Functions

- Types of Catalogue and Physical Forms of Catalogue

- Principles of Cataloguing: Ranganathan's Cannon, Paris Principles

- Introduction to Catalogue Codes: CCC, AACR-IIR

Unit 2:Entry Elements, Filing Rules & Subject Headings
- Kinds of Entries and their Elements of Description

- Elements of Bibliographic Description of Non-Book Material (AACR-IIR)

- Rules for Choice and Rendering of Headings in AACR –IIR

- Subject Heading Lists: Sears List & LCSH

Unit 3: Standards of Bibliographic Description
- ISBD, FRAD (Functional Requirements for Authorized Description), GARR

(Guidelines for Authority Records and References), RDA (Resource Description and Access)
- Standards for Bibliographic Information Interchange and Communication- ISO 2709, Z39.50, Z39.71
- ISBN & ISSN

Unit 4: Bibliographic Record Formats& Other Aspects
- Bibliographic Records Format- MARC 21, UNIMARC, CCF

- Cataloguing of E-Resources- Metadata Standards (Dublin Core)

- Derivatives of Cataloguing (Copy Cataloguing)

ORGANISATION OF KNOWLEDGE – CATALOGUING PRACTICE
(A)
Preparation of Main and Added Entries of Documents according to AACR – IIR (Latest edition) having the following items
• Single Responsibility and Shared Responsibility, Mixed Responsibility
• Corporate Author, Continuing Resources (Serials), Pseudonyms and Anonymous works

• Classics, Non-Book Materials (Cartographic Materials & e-resources)
• Assigning Subject Heading to Documents according to Sears List of Subject Heading (Latest edition)

INFORMATION SOURCES & SERVICES – PRACTICE
The Candidates are required to submit a report on:
- Evaluation of Reference Sources: Print and Electronic

- OPAC/Web OPAC Search Strategy

- Indexing & Abstracting Records

- Current Awareness List

- Bibliography Compilation

COMMUNITY INFORMATION SERVICE
Unit 1: Basics of Community Information
- Community Information: Definition, Origin and Scope
- Need for and Sources of Community Information
- Role of Libraries in Dissemination of Community Information

Unit 2: Community Information Services
- Community Information Services : Meaning, Types and Target Users
- Community Information Centres: Planning and Role of Information Services
- Community Information Services to Specific Communities

a) Rural, Urban and Metropolitan Communities
b) Industrial, Business Communities
c) Academic, Research, Institutional and R & D Communities
d) Physically/Mentally Disadvantaged Communities
e) Children, Women and Senior Citizens
- Community Information Services in India, UK and USA

INFORMATION RETRIEVAL SYSTEMS
Unit 1: Basics of Information Retrieval Systems
- Definition, Components and Types of ISAR Systems

- Elements of File Organisation

- Artificial Intelligence and Expert System

- Information Retrieval Models

Unit 2: Subject Representation and Indexing Languages
- Alphabetical Subject Representation

- Contributions of Cutter, Kaiser, Ranganathan, Farradane and Coates

- Characteristics of Indexing Languages

- Vocabulary Control-List of Subject Headings, Thesaurus and

Thesauro facet, Classaurus
Unit 3: Indexing Systems and Techniques
- Assigned Indexing vs Derived Indexing

- Assigned Indexing Systems: Pre-Coordinate (PRECIS, POPSI and Chain Indexing) and Post-Coordinate Indexing System (Uniterm Index System)

- Derived Indexing Systems: Title based (KWIC, KWOC and KWAC), Citation based(SCI, SSCI, etc.) and Full-Text (STAIRS, LEXIS-NEXIS, etc.)
- Automatic Indexing: COMPass

Unit 4: Information Searching and Evaluation
- Search Methods and Search Strategy, Boolean Search
- Information Searching in different Media: Print and Electronic
- Need and Parameters of Evaluation
- Retrieval Performance: Recall and Precision

ICT APPLICATION IN LIBRARIES – THEORY
Unit 1: Library Automation
- Purpose, Planning and Implementation
- Library Automation Software: Types and Features
- Open Source Library Software: Koha, Greenstone &D-Space
- Automation of Housekeeping Operations: Acquisition, Cataloguing, Circulation, Serials Control

Unit 2: Automated Services
- Electronic Reference Services
- Bibliographic and Database Search Services
- CAS/SDI in Automated Environment
- Electronic Document Delivery Service
- Library 2.0

Unit 3: Library Networks and Consortia
- Objectives, scope and characteristics
- Major Library Networks: INFLIBNET, DELNET, OCLC
- Library Consortia: UGC Infonet, INDEST-AICTE, National Knowledge Resource Consortium

Unit 4: Library Security Technology
- Barcode
- RFID
- CCTV, Biometrics, Smartcard

ICT APPLICATION IN LIBRARIES – PRACTICE

Unit 1: Hands-on experience on Library Automation Software
- Integrated Library Software: Koha / SOUL

Unit 2: Hands-on experience on Website Designing
- HTML / Dreamweaver
ACADEMIC LIBRARY SYSTEM

Unit 1: Academic Library: Functions and Services
- Role of Academic Library in Higher Education
- Academic Library Services
- Academic Library Management

- Role of UGC for Academic Library Development

Unit 2: Resource Management
- Physical Resources including ICT Infrastructure
- Human Resource Development
- Financial Resource Management

Unit 3: Collection Development
- Collection Development Policy, Weeding out Policy
- Problems in Collection Development
- Role of Library Committee in Collection Development

Unit 4: Staff Development and Continuing Education
- Staffing Norms and Standards
- Continuing Education Program for Academic Libraries
- Personnel Management

PUBLIC LIBRARY SYSTEM
Unit 1: Public Library Development
- Public Library: Societal and National Development
- UNESCO Contribution for Public Library Development
- Administration of Public Libraries
- National Agencies for Public Library Development
- Library Legislation
Unit 2: Public Library Services
- Library Services: Types
- Public Library as Knowledge Centers
- Changing Dimensions of Public Library Services
- Evaluation of Public Library Services

Unit 3: Public Library: Resource Development
- Resource Mobilization in Public Library
- Public Library Finance
- Information Resource Development for Public Libraries
- Human Resource Development in Public Libraries

Unit 4: Public Libraries: Trends and Development
- ICT Application in Public Libraries
- Resource Sharing and Networking
- Changing Scenario of Public Libraries in India, UK & USA
- Web based Public Library Services

PRESERVATION & CONSERVATION OF LIBRARY MATERIALS
Unit 1: Basics of Preservation and Conservation: Overview
- Preservation and Conservation: Historical Development, Need and Purpose
- Preservation of Print Materials: Books, Periodicals, Pamphlets
- Digital Preservation

Unit 2: Preservation of Non-Print Materials
- Palm Leaves
- Manuscripts
- Films
- Floppies and Disks

Unit 3: Hazards and Control Measures to Library Materials
- Environmental Factor (Temperature, Humidity, Water, Light, Air Pollution, Smoke, Dust, etc)
- Chemical Factors
- Biological Factors

Unit 4: Binding
- Types of Binding of Library Materials
- Binding Material and their Varieties
- Binding Process
- Standards for Library Binding

INFORMATION RESOURCE DEVELOPMENT
Unit 1: Types of Information Resources
- Documentary (Primary, Secondary & Tertiary)
- Non-Documentary
- E-Resources

Unit 2: Book Selection Principles
- **Drury's Principle**
- **Dewey's Principle**
- **McColvin's Principle**
- **Ranganathan's Principle**

Unit 3: Selection Tools
- Current List
- Bibliographies
- Library Catalogue
- Books in Print
- Publishers' Catalogue
- Directories
- WebOPAC (WorldCat)
- Websites

Unit 4: Categories of Documents
- **By Physical Characteristics**
- **By Information Characteristics**
- Books and Periodicals
- **Theses and Dissertations**
- **Govt. Publications**
- **Grey Literature**

INTERNET AND ITS APPLICATIONS
Unit 1: Internet: An Overview
- Internet: Introduction, Historical Development and Scope of Internet
- Internet Architecture: H/W & S/W Components, Client/Server Principle, Routers, Connection Types, ISP, Protocols, Uniform Resource Locator, IP Address
- Domain Name System
Unit 2: Web Languages & Web Browsers
- Web: Introduction, History and Functions
- Web Languages: HTML, XML, CSS, ASP, JavaScript, PHP
- Web Browsers: Internet Explorer, Mozilla Firefox, Google Chrome
Unit 3: Intranet & Internet Security
- Intranet: Components, Prerequisites and Services
- Extranet: Components, Prerequisites and Services
- Internet Security: Types of Security, Firewalls, Anti-Virus, Anti-Spyware
Unit 4: Internet Tools & Services
- Communication Tools: Email, Telnet, Discussion Groups
- Search Tools: Gopher, Veronica, Jughead, Archie, Search Engines
- Content Enriching Services: Blogs, Wikis, Social Community Websites
E-RESOURCES
Unit 1: Types of e- Resources
- E-books, E-journals, E-reports, ETD

- Access to E-Resources through Library Consortia (UGC-INFONET Digital Library Consortium, INDEST-AICTE, National Knowledge Resource Consortium)

- Open Educational Resources

Unit 2: Web Resources
- Science & Technology

- Humanities

- Social Sciences

- Evaluation of Web Resources

INFORMATION SYSTEMS AND NETWORKS
Unit 1: Information Systems
- Definition, Types and Characteristics

- Information Organizations and Systems

- Planning and Designing of Information System

- Evaluation of Information System

Unit 2: National Information Systems
- ENVIS

- BIS

- PIS

Unit 3: Global Information Systems
- AGRIS

- INIS

- INSPEC

- MEDLARS

Unit 4: Networks
- Resource Sharing and Networking – Objectives and Scope
- Features and Characteristics of Library Networks
- Data Networks – NICNET, ERNET, NKN

RESEARCH METHODOLOGY
Unit 1: Research and Research Design
- Concept, Meaning, Need and Process of Research
- Types of Research: Fundamental and Applied
- Research Design, Types of Research Design
- Designing Research Proposal
- Literature Search – Print, Non-Print and Electronic Sources
- Literature Review

Unit 2: Research Methods
- Scientific Method
- Historical Method
- Survey and Case Study Method
- Experimental Method

Unit 3: Data Analysis and Interpretation
- Data Collection Techniques: Questionnaire, Interview, Observation, Sampling and Delphi
- Presentation of Data-Tables, Charts and Graphs
- Interpretation of Data: Frequency Distribution, Measures of Central Tendency, Analysis of Time Series, Co-relation Studies and Analysis of Variance
- Use of Statistical Packages

Unit 4: Bibliometric Methods and Report Writing
- Bibiometric Studies: Meaning, Scope and Parameters
- Bibliometric Laws and their Applications
- Informetrics, Scientometrics and Webometrics
- Guidelines for and Preparation of Writing Research Report (Thesis and Dissertation)
CONTENT MANAGEMENT AND DIGITAL LIBRARY – THEORY
Unit 1: Content Management & Digitization
- Content Development: Concept; Content Creation & Organization
- E-Content Development Strategies
- Virtual Learning Environment
- Digitization Process, Tools and File Formats

Unit 2: Digital Library Concepts
- Digital Library & Institutional Repository: Concepts; Digital Library Initiatives (National & International)
- Digital Library Software(s)
- Digital Library Creation using D-Space

CONTENT MANAGEMENT AND DIGITAL LIBRARY – PRACTICE
Unit 1: Content Management & Digitization Practice

- Hands on practice of Content Management Software using Joomla
- Hands on practice of Scanner, Digital Camera & OCR

Unit 2: Digital Library Practice
- Hands on practice of Digital Library creation using D-Space / Greenstone
- Creation of Communities & Collection, Submission Process

INTELLECTUAL PROPERTY RIGHTS
Unit 1: Intellectual Property and Rights
- IP: Concept, Genesis and Development
- Categories of IP
- Enforcement of Intellectual Property Rights& Role of WIPO
- IPR Acts and its Application in Electronic Environment
- Emerging Issues in Intellectual Property

Unit 2: Copyright
- Copyright: Meaning and Scope
- Rights to Copyright Owner
- Licensing of Copyright
- Copyright of Electronic Resources
- Copyright Laws and Related Issues

Unit 3: Patents
- Concept and Scope
- Patent Laws in India & Abroad
- Protection of Inventions

Unit 4: Copyright& Patent Violation and Infringement
- India
- USA
- UK
KNOWLEDGE MANAGEMENT
1: Basics of Knowledge Management
- Concept of Knowledge
- Types of Knowledge
a) Explicit Knowledge
b) Implicit Knowledge
- Concept and Scope of Knowledge Management
- Knowledge Management Cycle

Unit 2: Knowledge Management: Creation & Tools
- Knowledge Creation, Access, Transfer and Sharing
- Knowledge Tools
- Knowledge Networks
- Knowledge in Decision Making

Unit 3: Pre-requisites of Knowledge Management

- Sharing of Expertise
- Knowledge Mapping
- Knowledge Worker

Unit 4: Trends and Challenges of Knowledge Management
- KM Initiatives in Indian Organization
- Software for Knowledge Management
- Pioneers in Knowledge Management
- Advances in Knowledge Management

INFORMATION LITERACY
Unit 1: Emergence of Information Literacy
- Information Society and Information Literacy
- Information Literacy: Definition, Models and Standards
- Information Literacy: Strategic Plan
- Information Literacy and Lifelong Learning
Unit 2: ICT and Media Literacy
- Computer Literacy and E-Literacy
- Digital Literacy
- Media Literacy
- Information Literacy and Bridging the Digital Divide
Unit 3: Information Literacy and Libraries
- School, College and University Libraries
- Public Libraries
- Special Libraries
- Information Literacy and LIS Education
Unit 4: Policy and Advocacy
- Information Literacy: Initiatives and Forms in USA, UK and Australia
- Policies, Guidelines and Standards: UNESCO, IFLA and ALA
- Information Literacy: Skills and Competencies
- Information Literacy: Best Practices

Ph.D Course Work

Foundations of Research
- Meaning and definition, concepts, nature and objectives

- Types of research, Ethics in research

- Research Areas in LIS, Current Developments, Role of research in the development of scholarship

Unit-II Research Design and Methods
- Selection of a problem for research- Mode of selection, Sources of problems, Process of identification, Criteria of selection, Formulation of the selected problem

- Research Design, Hypothesis,

- Literature search- print, non-print and electronic sources

- Research proposal

- Types of research: Qualitative and quantitative method of LIS research- Scientific, Historical, Descriptive, Survey, Observation, Experimental, Case Study, Delphi Techniques.
- Bibliometrics, Informatics, Scientometrics, Webometrics,

Unit-III Data Collection, Analysis and Interpretation
- Data collection: Questionnaire, Interview, Observation

- Sampling techniques, sample design or choice of sampling techniques, sample size, sampling and non-sampling errors.

- Presentation of Data- Tables, Graphs, Charts

- Interpretation of Data- Frequency Distribution, Measures of central tendency, Mean, Median &

Mode, Time Series, Co-relation studies, ANOVA, Regression Analysis
- Use of statistical packages

Unit-IV Research Reporting
- Research reporting: Organisation of report, Structure, Style, Contents, Guidelines of Research Reports, Style Manual – Chicago – MLA-APA etc. Automatic Citation Builder, Endnote, Ref. work. and Methods of Research Evaluation

- Reference Management Software
RESEARCH PUBLICATION & ETHICS (RPE)

A-Theory
RPE 01: PHILOSOPHY AND ETHICS (3hrs)
1. Introduction to Philosophy: definition, nature and scope, concept, branches
2. Ethics: Definition, moral philosophy, nature of moral judgements and reactions.
RPE 02: SCIENTIFIC CONDUCT (5hrs.)
1. Ethics with respect to science and research
2. Intellectual honesty and research integrity
3. Scientific misconducts: Falsification, Fabrication and Plagiarism (FFP)
4. Redundant publications: duplicate and overlapping publications, salami slicing
5. Selective reporting and misrepresentation of data
RPE 03: PUBLICATION ETHICS (7 hrs.)
1. Publication ethics: definition, introduction and importance
2. Best practices/standards setting initiatives and guidelines: COPE, WAME etc.
3. Conflicts of interest
4. Publication misconduct: Definition, concept, problems that lead to unethical behavior and vice versa, types
5. Violation of publication ethics, authorship and contributorship
6. Identification of publication misconduct, complaints and appeals
7. Predatory publishers and journals
B- Practice
RPE 04: OPEN ACCESS PUBLISHING (4hrs.)
1. Open access publications and initiatives
2. SHERPA/RoMEO online resource to check publisher copyright & self-archiving policies
3. Software tool to identify predatory publications developed by SPPU
4. Journal finder/journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.
RPE05: PUBLICATION MISCONDUCT (4 hrs.)
A. Group Discussions (2 hrs.)
1. Subject specific ethical issues, FFP, authorship
2. Conflicts of interest

3. Complaints and appeals: examples and fraud from India and abroad
B. Software tools (2 hrs.)
1. Use of plagiarism software like Turnitin, Urkund and other open source software tools
RPE 06: DATABASES AND RESEARCH METRICS (7 hrs.)
• **A. Databases (4hrs.)**

1. Indexing databases
2. Citation databases: Web of Science, Scopus etc.
B. Research Metrics (3hrs.)
1. Impact factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score
2. Metrics: h-index, g index, i10 index, altmetrics

INFORMATION AND KNOWLEDGE SOCIETY: LIS PERSPECTIVE
Unit -1 Information Society
Information Society: Attributes, Characteristics, & Components

Information Infrastructures- National and Global

Information Economics, Economics of Information, Information as Economic Resource.

National Information Policy, Information Digital Literacy.

Unit-II Knowledge Society
Definition, Characteristics and Components.

Knowledge Economy and Knowledge Industry.

Knowledge Management, National Knowledge Commission.

Libraries as Gateways to Knowledge.

Towards a Knowledge Society and Role of Knowledge Professionals.

Unit-III Digital Library Initiatives
- Electronic Theses and Dissertations
- National Digital Library (MHRD)
- Inflibnet (e-soudhsindhu)
Unit-IV Trends and Developments
Role of Information in Planning, Decision Making, Innovations and National Developments.

Impact of Information and Knowledge Society on Education, Training and Research.

Conventional vs Web Based Learning, MOOC

Recent Trends and Developments in LIS Education and Research.

Impact of social media on Society and National Development

LIBRARY AND INFORMATION TECHNOLOGY MANAGEMENT
Unit-I Trends and Developments in Library and Information Management
Resource Management and Development: Human, Financial and E-Resources

Resource Mobilization and Outsourcing

Information Marketing

Disaster Management

Digital Information Resources Management

Unit-II Library Networks and Consortia
Networks and Networking: Types, Hardware/ Software Requirements, Network protocols, Network security

Data Networks and Library & Information Networks

Networked Based Library and Information Services

Library Consortia

Management of Library and Information Networks and Consortia

Unit-III Digitization
Digitization: Need, Methods and Equipment, Meta Data, Standards of Meta Data

Digital Library: Components, Digital Library Initiatives in India, Open Access Initiative, Open Source Philosophy

Unit-IV Web and Social Media Applications in LIS
- Web 2.0, Blog, RSS Feed, Podcasting, Social Networking
- Cloud Computing, Digital Reference Tools

NORTH EASTERN HILL UNIVERISTY

(MLISc.)

FOUNDATIONS OF LIBRARY AND INFORMATION SCIENCE
Objective: This paper aims at familiarizing the students with the basic concepts, systems and services of libraries and information centres.
Unit I
Nature and Scope of Library and Information Science; Types, Activities and Services of Libraries: Public, Academic, Special and National Libraries; Five Laws of Library Science and their Implications; Concept and Types of Information Systems: INIS, AGRIS, ENVIS, NASSDOC, DESIDOC, NISCAIR, INFLIBNET.
Unit II
Information Society: Concept and Features; Information Economics and Economics of Information; Information and National Development; Right to Information (RTI); Information Literacy: Concept and Models.
Unit III
Library Legislation in India with Special Reference to North East India; Library Extension Services: Concept and forms; Community Information Services: Concept and Forms; Intellectual Property Rights (IPR)- Concept and Types.
Unit IV
Library Profession- Characteristics and Ethics; Professional Associations in Library and Information Science and their Activities: IFLA, ILA, ASLIB, IATLIS, etc. Library and Information Activities of Professional Organizations: UNESCO, RRRLF, National Knowledge Commission (NKC).

KNOWLEDGE ORGANISATION-I (Theory)

Objective *: To introduce the structure and features of Universe of Knowledge and to understand the principles and practices of document description.*

(a) Classification

Unit I
Library Classification: need, purpose and principles; Universe of Knowledge and formation of subjects; structure of Dewey Decimal Classification and Colon Classification schemes.

Unit II
Idea plane: canons, principles and postulates; fundamental categories.
Verbal plane: canons and principles.

(b) Cataloguing

Unit III
Library cataloguing: need, purpose and principles; forms and types of catalogue; kinds of entries and elements of description.

Unit IV
Subject catalogue: Sears List of Subject Heading (SLSH), Library of Congress Subject Heading (LCSH), chain indexing. Structure of Anglo American Cataloguing Rules II and Classified Cataloguing Code

KNOWLEDGE ORGANISATION-I (Practice)

Objectives*: To develop skills in subject analysis and proficiency in using standard schemes of classification and subject cataloguing ; to develop ability in applying methods and tools of content description.*

(A) Classification

Classification of documents by Dewey Decimal Classification (available edition) and Colon classification (available edition) in the following graded steps:

Unit I
Classification of documents having "simple subjects"

Unit II
Classification of documents having "compound subjects"

(B) Cataloguing

Practical cataloguing of books according to Anglo-American Cataloguing Rules -1988 edition with amendments 1999, 2002. Assigning subject heading using Sears List of Subject Heading in the following graded steps:

Unit III
Works of personal authorship; Works of shared authorship; Works of Mixed responsibility.

Unit IV
Anonymous works; Works of corporate authorship and Analytical.

INFORMATION SOURCES AND SERVICES

Objective : *– This paper, helps identify various information users, their information needs and information seeking behavior and the sources of information best suited for each group.*

Unit I

Information– Concepts; Life Cycle; Characteristics; Compilation and Dissemination; Primary, Secondary and Tertiary Sources (Print and Non-Print Formats) –Concepts; Characteristics and Uses

Unit II

Reference Service – Concepts; Scope; Modes; Enquiry Techniques; Information Searching Techniques From Print and Electronic Sources
Referral Services; Document Delivery Services; Translation Services –Concepts; Scope and Usefulness
Qualifications, Qualities, Duties and Role of Reference Staff

Unit III

Information Needs and Information Seeking Behaviour of Users – History; Concepts and Characteristics
Models of Information Seeking Behaviour – Models by Wilson; Dervin; Kulhthau and Ellis
Information Sources and Services in the Humanities; Social Sciences; Sciences; Business and Law

Unit IV

User Studies – History; Concepts; Goals; Objectives; Methodology and Case Studies User Education – Concepts; Goals; Objectives; Role and Techniques

FOUNDATION OF COMPUTER APPLICATIONS

Unit I:

Computer Applications: introduction, development, and generations; Information Technology: introduction and scope; development; Computer generations Computer Components: Hardware and Software, Input and Output Devices; Storage devices; Number system: Binary number system, Binary codes, ASCII and Unicode; data types

Unit II:

Operating System: concept, types and functions: DOS, LINUX, and Windows File formats: types, nature and characteristics Office Packages: Word Processor, Spreadsheet, Presentation Tools, Ms-Access Practical: Operating System, Word Processor, Spreadsheet, Presentation Tools, Ms-Access

LIBRARY SYSTEM ANALYSIS AND DESIGN

Unit I:

Information Systems Definitions; Types of Systems: Transaction Processing Systems, Management Information Systems, and Decision Support Systems; System Development Life Cycle; Systems Development Process: Traditional Waterfall, Prototyping, Computer-Aided Software Engineering (CASE), Joint Application Design (JAD), Rapid Application Development (RAD), Agile Methodologies and eXtreme Programming.

Unit II:

Systems Acquisition; Outsourcing; Sources of Software; Off-the-Shelf Software Selection Criteria; Request for Proposal (RFP) and Annual Maintenance Cost (AMC); Initiating and Planning: Process, Elements, Deliverables and Outcomes; Feasibility Assessment: Economic Feasibility, Technical Feasibility and Other Feasibility Concerns; Baseline Project Plan.

Unit III:

Requirements Determination: Traditional, Contemporary and Radical Methods; Requirement Structuring: Data Flow Diagram, Use Case, Structured English, Decision Tables and Decision Tress; Basic Database Design Process; Forms and Reports: Design, Formats, and Usability Assessment; Interfaces and Dialogues: Interaction Methods and Devices, Designing Interfaces, Designing Dialogues and Graphical Interface Design Issues.

Unit IV:
System Implementation: Coding, Testing, Installation, System Documentation, User Training and Support; System Maintenance: Types, Cost and Managing Maintenance; System Analyst: Role, Responsibilities and Required Skills; Security and Ethics.

KNOWLEDGE ORGANISATION-II (Theory)

Unit I
Notational plane: qualities, types; Canons and Mnemonics; Phase relation.
Unit II
Devices: Subject, Chronological, Geographical, Super imposition, Classic; Common isolates; Call number and collection numbers; automated library classification.

(b) Cataloguing

Unit III
Shared cataloguing: principles and methods; Union Catalogue; OCLC; OPACS; ISBN, ISSN; Resource Description and Access (RDA).
Unit IV
Bibliographic formats: concept, need and purpose; Types: CCF, MARC 21, UNIMARC; Citation: concept, need and purpose; Online citation tools; Authority files.

KNOWLEDGE ORGANISATION-II (Practice)
(a) Classification

Classification of documents by Dewey Decimal Classification and Colon classification in the following graded steps:
Unit I
Classification of documents having "common sub divisions and other auxiliaries"
Unit II
Classification of documents having "complex subjects"
Classification of documents having "complexities of mixed nature"

(a) Cataloguing

Practical cataloguing of books according to Anglo-American Cataloguing Rules -1988 edition with amendments 1999, 2002. Assigning subject heading using Sears List of Subject Heading in the following graded steps:
Unit III
Continuous resources (serials); Analysis
Unit IV
Non-book materials (cartographic materials, thesis, audio-visual materials, etc.) and e-resources.

LIBRARY SOFTWARE (Theory & Practice)
Objective: *Is to train the students on Open Source Library Management Software and Institutional Repository Software*

(Theory)
Unit I
Open Source Software (OSS): Overview, Philosophy and Characteristics; Overview of Commercial Software, Free Software and Freeware; Standards: National Information Standards Organisation

(NISO) and The Digital Library Federation (DLF); Metadata: Dublin Core, MARC, Resource Description and Access (RDA); Open Archives Initiative (OAI-PMH); Licensing Policy: GNU, Open Source Licenses and Free Software.

Unit II

Open Source Operating System (e.g., Linux) Hosting: Client, Server; Library Management Software: Proprietary and OSS; Introduction to proprietary software: **SOUL**, Library Management Software: **Koha**, Repository software: **DSpace**

(Practice)
Unit III

Practical's on Open Source Library Management Software (e.g., Koha): Introduction, Features, Architecture, Standards, Installation, Customization, and Use

Unit IV

Practical's on Open Source Repository Software (e.g., DSpace): Introduction, Features, Architecture, Modules, Installation, Customisation and Use

LIBRARY HOUSEKEEPING OPERATIONS
Unit I- LIBRARY HOUSEKEEPING OPERATIONS (THEORY)

Overview of NEHU Central Library Operations: Acquisition; Technical; Circulation; Periodical; Reference; Documentation and Maintenance

Unit II –LIBRARY HOUSEKEEPING OPERATIONS (PRACTICE)

Job Diary –A Report on observation of the NEHU Central Library operations is to be submitted to the Department for evaluation by an external examiner. A viva voce on the observations and the report will also be conducted by the Department.

Study Tour Diary - A Report on operations of Libraries visited during the study tour is to be submitted to the Department for evaluation by an external examiner. A viva voce on observations and the report will also be conducted by the Department.

INFORMATION RETRIEVAL
Unit I

Information Retrieval (IR): Concept, Nature; Content Analysis: Concept and Types; Mapping the Information Content

Unit II

Indexing languages; Index construction: Concepts, Theory: Rationalist theories of Indexing; Historicist , Hermeneutical Theories of indexing Pragmatic and Critical Theories of indexing, Methods, Vocabulary Control; Subject Indexing: Sear's List and LCSH, Thesaurus, Thesaurofacet, Classaurus; Pre-coordinate Indexing System, Chain indexing, PRECIS -Preserved Context Index System, POPSI – Postulate based Permuted Subject Indexing , SLIC – Selective Listing in Combination; Post-coordinate indexing system ,Uniterm Indexing System, Title derived Indexing System, Automatic Indexing, COMPASS.

Unit III

Types of search: Boolean, Proximity, Fuzzy, Iterative Search Techniques; Structure for Dictionaries, Querying, Wildcard Queries, Interpretation, Full Text Search, Spelling Correction, Phonetic Correction, Search engines, Web Search Basics, Z39.50, Metadata in IR

Unit IV

Design and Evaluation of Information Retrieval System (IRS), IR Model: Probabilistic Retrieval Model, Language Models, XML Retrieval; Text classification, Naive Bayes Vector Space Classification, Clustering, Web Crawling, and Link Analysis. Emerging Trends in IR: Artificial Intelligence, Expert System, Text Summarization, Text Compression and Optical character recognition (OCR)

RESEARCH METHODLOGY

Objective – *To help develop an understanding of the concepts and methods in research*

Unit I

Research- meaning, need and significance; Types of Research- descriptive, analytical, applied, fundamental, quantitative, qualitative, conceptual, empirical, interdisciplinary, multidisciplinary and collaborative; Identification of Research Problem- concept, need and process of selecting the problem; Variables; Hypothesis- meaning, testing of hypotheses and procedure for hypothesis testing; Designing a Research Proposal- components and procedure.

Unit II

Methods: Historical Method; Scientific Method, Experimental Method; Descriptive Method; Survey Method and Case Study. Data collection tools and techniques: Questionnaire; Schedule; Interview; Observation, etc.

Unit III

Data Analysis and Interpretation: Descriptive Statistics-Measures of Central Tendency; Mean, Mode, Median; Tabulation and Generalisation; Measures of dispersion, variance and covariance; Standard Deviation Graphical presentation of data. Parametric and Non-Parametric test ;Statistical Packages.

Unit IV

Informatrics, Bibliometrics,Scientrometrics &Webometrics; Bibilometric Laws: Lotka's,Bradford's and Zipf's Law; Citation Analysis, Co-citation Coupling and Bibliographic Coupling; Bibliographical Database.

COLLECTION DEVELOPMENT

Unit I

Collection Development – Concept; Goals and Methods
Principles of Collection Development – Principles by Ranganathan; Drury; Dewey; Library of Congress and American Library Association
Collection Development Policies – Concepts and Types
Planning for Collection Development – Committees; Staffing; Budgeting; Implementation and Evaluation

Unit II

Selection Tools – Types: Bibliographies; Publishers' Catalogues and Book Reviews Evaluation of Selection Tools
Stock Verification and Rectification
Preservation of Collection (Print and Non-Print)– Concepts; Goals and Methods

DATABASE MANAGEMENT SYSTEM

Unit I:

Introduction, Characteristics and Advantages; Database Concepts: Data Models, Schemas and Instances; Database Architectures: Three Schema Architecture, Centralized and Client/Server; Data Independence; Database: Languages and Interfaces, Database System Environment; Classification of Database Management Systems; Phases of Database Design

Unit II:

Entity-Relationship (ER) Model: Entity Types, Entity Sets, Attributes and Keys; Relationships in ER Model: Relationship Types, Relationship Sets, Roles and Constraints; Naming Conventions and Design Issues; Enhanced Entity-Relationship (EER) Model: Subclasses, Superclasses and Inheritance; Constraints, Specialization and Generalization Hierarchies in EER

Unit III:

Data Abstraction, Knowledge Representation and Ontology Concepts; Relational Data Model: Concepts, Constraints and Schemas; Update Operations, Transactions and Constraint Violations;

Relational Database Standard; Functional Dependencies; Normalization for Relational Databases; Relational Database Design

Unit IV:
Object-Oriented Databases Concepts: Object Identity, Object Structure and Type Constructors; Encapsulation of Operations, Methods and Persistence; Types Class Hierarchies and Inheritance; Object Database Standards, Languages and Design; Object Relational and Extended Databases System; Emerging Database Technologies and Applications

INFORMATION COMMUNICATION TECHNOLOGY
Unit I:
Introduction to Communication Systems and Telecommunications; Data Communications: Components, Representation and Data Flow; Networks: Criteria, Physical Structures and Topologies; Network Categories: LAN, WAN, MAN and Internetwork; Protocols and Standards; Network Models: Layered Task Concept, Open System Interconnect (OSI) Model and TCP/IP

Unit II:
Data to Signal Conversion: Line coding, Block coding and Scrambling; Data Transmission Modes: Parallel and Serial; Multiplexing: Frequency Division Multiplexing (FDM) and Time Division Multiplexing (TDM); Spread Spectrum: Frequency Hopping Spread Spectrum (FHSS) and Direct Sequence Spread Spectrum (DSSS); Transmission Media: Wired and Wireless

Unit III:
Switching: Circuit-Switched, Datagram, and Virtual Circuit Network; IEEE Standards on Local Area Network; Wired Local Area Network: Standard, Bridged and Switched Ethernet; Wireless Local Area Network: Bluetooth Architecture and Layers; Connecting Devices: Passive/Active Hubs, Repeaters, Bridges, Switches (layer two & three), Routers, and Gateway; File Transfer Protocol (FTP) and Remote Logging

Unit IV:
Connectivity: PSTN, DSL and Lease line; Email: Architecture, User Agent, SMTP, POP, IMAP and Web Mail; WWW: Client, Server, URL and Cookies; Web Documents: Static, Dynamic and Active; HTTP: Transaction, Persistent/Non-persistent Connection and Proxy Server; Streaming Audio/Video using Web Server, Metafile and Media Server; Real-Time Interactive Audio/Video; VoIP (Voice over Internet Protocol)

MANAGEMENT OF LIBRARY AND INFORMATION SYSTEMS
Unit I
Management Concept, Functions and Principles; Schools of Management Thought: Classical, Scientific, Behavioural, Decision Theory, Contingency Approach, Systems Approach.

Unit II
Planning: Concept, Need and Levels; Management by Objectives (MBO); Decision Making. Total Quality Management (TQM); Change Management.

Unit III
Human Resource Management: Manpower Planning; Job Analysis, Job Description and Job Evaluation; Recruitment Procedures; Performance Appraisal; Leadership; Communication Process; Motivation; Organizational Manual; Annual Report.

Unit IV
Budgeting- Concept, Principles and Types; Resource Mobilisation for Libraries and Information Centres; Marketing of Information Products and Services. SWOT Analysis; Project Management.

DIGITAL LIBRARY
Unit I:

Definitions and Concepts: Digital Libraries and Institutional Repositories; Benefits and Limitations; Planning: Strategies and Implementation; Building: Acquisition, Management and Dissemination. Basic Concepts of Hybrid Libraries, Library Portals and Repositories; Institutional Repository: Planning, Content Submission and Acquisition.

Unit II:

Social Relevance: Human Development, Scholarly Archives, Preservation of Traditional Culture and Music. Legal Issues: Intellectual Property Rights, Copyrights in Digital Environments and Exceptions for Libraries; Legal Procedures: License Acquisition, Secondary License and Users Education. Digitization: Process, Purpose Localization, Selection Criteria and Prioritization.

Unit III:

Digital Formats: Textual and Non-textual; Character Encoding: Issues, Schemes and Standard; Mark-ups: Procedural, Presentational and Descriptive; Electronic Image: Resolution, Pixel and Color Encoding; Image Compression: Lossless and Lossy Techniques; Portable Document Format: Object types, features, application software, embedded images and true PDF; Document Conversion: Word to PDF/HTML/XML and XML to HTML/PDF.

Unit IV:

Infrastructural Requirements: Equipment, Software, Manpower and Costs; Workflow: Process, Document Management, Scanning, OCR (Optical Character Recognition) and Editing; Digitization for Preservation; Metadata: Types, Standards and Harvesting; Digital Library Website and Content: Visibility, Accessibility and Search-ability;
Greenstone Digital Library Software: Installation, User Interface, Collection Building, Creating, and Previewing.

E- LEARNING AND CONTENT MANAGEMENT SYSTEM

Unit I

Open Source Software for Content Management System (CMS): MediaWiki, Joomla, Drupal, Zope; Wiki Hosting Services, Wiki Technologies in Libraries for Designing Subject Based Encyclopedias'; Subject directory/portal

Unit II

Open Source Software for Learning Management System (LMS): Moodle, ATutor, Claroline, Brihaspati (The Virtual Classroom). Courseware Management system: College.

(Practice)

Unit III

Practicals on CMS (e.g., Joomla / Drupal)
Installation and Customization:
☐ Basic Requirements
☐ Manual Installation
☐ Configuration Settings
☐ Publishing Content Using

Unit VI:

Practicals on LMS (e.g., Moodle / ATutor)
Installation and Customization
☐ Basic Requirements
☐ Manual Installation
☐ Configuration Settings.

INFORMATION SOURCES AND SERVICES

Unit I- EVALUATION AND COMPILATION CRITERIA FOR INFORMATION SOURCES AND SERVICES

Evaluation Criteria for Reference Sources: Print and Electronic, Compilation Techniques: Bibliographies; Contents Lists; Indexes; Abstracts and Press Clippings

Unit II – EVALUATION AND COMPILATION OF INFORMATION SOURCES AND SERVICES

Evaluation Report on Reference Sources: Print and Electronic, Compilation Report on Bibliographies; Contents Lists; Indexes; Abstracts and Press Clippings

PONDICHERRY UNIVERSITY

M. Lib. I. Sc. + B. Lib. I. Sc.

Library, Communication and Society

COURSE OUTLINE

Unit 1: Information: Nature, Property and Scope – Data, Information and Knowledge – Types of Libraries (including digital/electronic/virtual libraries) and their functions – Role of libraries in the development of a society – Information Theory – Information Science as a discipline – Five Laws of Library Science and their implications.

Unit 2: Information Generation and Communication – Information, Communication Process, Media and Diffusion – Communication Theories and Models, Channels and Barriers – Digital Information – Social Media.

Unit 3: Library Policies Movement and Legislation – Library movement in India, Indian Scenario – Factors, Principles, Statutory Provisions for various types of libraries, Information Policy, Copyright Act 1957, Delivery of Books and Newspapers Act 1956, Press and Registration Act, Intellectual Property Rights, Right to Information Act 2005.

Unit 4: Information Profession and Professional Bodies – Librarianship as a profession: Professional ethics – Professional Associations and their roles: ILA, IASLIC, IATLIS, CILIP, ALA, IFLA, and UNESCO. 15

Unit 5: Information and Knowledge Society – National Information Policy – Information Infrastructure: National and Global – Information Society – Knowledge Society – Knowledge Profession – Information Economy – WSIS.

Reference and Information Sources

COURSE OUTLINE

Unit 1: Basics of Information Sources: Documentary and non-documentary sources – characteristics, scope and value; non-print and electronic sources; categories of information sources – primary, secondary and tertiary.

Unit 2: Types of Documentary Sources: Primary Sources – Periodicals, Technical reports, Patents, Standards and Specifications, Theses and Dissertations, Conference proceedings, Trade literature both in print and electronic versions; Secondary Sources – Dictionaries, Encyclopedias, Yearbooks and Almanacs, Biographical sources, Bibliographies, Geographical sources, Current sources, Statistical information sources, Handbooks and Manuals, indexing and abstracting sources, news summaries both in print and electronic versions. Tertiary Sources – Directories, Guides to reference sources, bibliography of bibliographies, monographs, list of serials, union catalogues, travel guides, textbooks both in print and electronic versions.

Unit 3: Non-Documentary Sources: Human and institutional sources of information, government ministries and departments, R&D organizations, learned societies, publishing houses, archives, data banks, information analysis centers, referral centers, and institutional websites.

Unit 4: Electronic Information Sources: Internet Information Resources – PLOS, DOAJ, E-Books, Open Access Resources, Open Educational Resources. Listserves, Subject Gateways. Criteria for the evaluation of information sources – print and electronic.

Unit 5: Databases (Full text, Citation and Bibliographic): ACM Digital Library, IEEE/IEE Electronic Library Online (IEL), Emerald, EBSCO, PsycINFO, Elsevier Science, PubMed Central, J-Gate, JSTOR, Web of Science, Scopus, SciFinder Scholar, , and RePEc.

Knowledge Organisation (Theory)

Unit 1: Library Classification – Meaning, need, purpose, functions – Notation: Need & Importance; types; qualities of a good notation, Mnemonics. Universe of knowledge – Structure and attribute – Modes of formation of subjects – Different types of subjects.

Unit 2: Principles of Classification – idea, verbal & notational planes; Facet analysis. Characteristics of Universal Library classification schemes CC, UDC, LC & DDC, Web Dewey.

Unit 3: Cataloguing: Purpose, structure, types including OPAC – Normative principles, Canons & Laws; Standard codes of Cataloguing – ISBDs and AACR, RDF.

Unit 4: Bibliographic Formats – ISO 2709, MARC-21, UNIMARC, CCF, Z39.50, W3C.

Unit 5: Organisation of Digital Resources – Metadata standards – Dublin core, Mark up languages; DOI (Digital Object identifier) – IFLA and LC initiatives – FRBR, FRAD, FRSAD, BIBFRAME 2.0

Knowledge Organisation

COURSE OUTLINE: Classification of Documents using Dewey Decimal Classification (22nd Edition)

ICT for Information Management (Theory and Practice)

COURSE OUTLINE

Unit 1: Understanding Information Technology: Components of Information Technology – Computer and Communication Technologies, types of computers – CPU, Storage and I/O Devices – Data representation in Computers: Binary Number System, Character encoding standards – ASCII, ISCII and UNICODE

Unit 2: Computer Software: System Software and Application Software; Programming Concepts: Open source and Propriety, Operating Systems: Windows & LINUX / UNIX. Working with windows. File organization & Database Management Systems.

Unit 3: Client-Server Architecture: Networks and Networking: Network topology, Networking – LAN, MAN, WAN, Internet, Intranet, Extranet.

Unit 4: Office Management: Word Processing, Spreadsheet, Presentation Software, Database (MS-Access)

Unit 5: DBMS – MySQL, Scripting Languages, .Net, Python, Java, HTML, XML, Web Graphics

Management of Libraries and Information

COURSE OUTLINE

Unit 1: Introduction to Management: Concept, definition and scope, management styles and approaches, principles and functions of management, principles of scientific management.

Unit 2: Collection Development and Management: Types of documents and selection and acquisition: tools, procedures and policies, problems and evaluation of collection development. Library operations - acquisition, serial control, technical processing, circulation & reference. Conservation & preservation, shelving, stock verification, binding and weeding out.

Unit 3: Human Resource Management: Objectives and functions – selection, recruitment, interviewing the candidates, training & staff development, performance appraisal, discipline and

grievances. Manpower Planning – job description, job analysis, job evaluation. Motivation, leadership and ethics.

Unit 4: Financial Quality and Management: Financial responsibility and control, Budget planning and evaluation tools. Budgeting techniques – cost benefit, cost effective analysis and accounting. Accountability and reporting. Planning strategies: concept – definition – need and steps – MBO – planning techniques – decision making. Operations planning – Gantt Charts, PERT/CPM, TQM. Strategic planning process – SWOT analysis.

Unit 5: Management of LIC: Principles of organizational structure, organizational structure of Library and Information Centres. Library Authorities, library statistics, Library rules and regulations. Managing in the 21st century – today's organizations, skill required for new managers.

Information Systems and Services

Unit 1: Information Systems: Concept, purpose & types. Global & National Information Systems; UNISIST, NISCAIR, NASSDOC, INIS, AGRIS, INSPEC and MEDLARS.

Unit 2: **Resource Building and Sharing:** Library networks; INFLIBNET, DELNET, OCLC, IFLA etc. Library Consortia in India, CSIR E-Journals Consortium, e-Shodh Sindhu, DELNET Consortium of E-Journals.

Unit 3: Reference Process: Digital reference service – Role and functions of Reference Librarian – Abstracting and Indexing Services – Information Analysis & Consolidation – Subject Guides and Mapping.

Unit 4: Information Services: CAS, SDI, Reprographic Service, Translation Service, Document Delivery, Referral Service, Newspaper clipping, Listserv, Blogs.

Unit 5: Information Use & User Studies: Theories and Models of Information Seeking behavior – Information Literacy.

ILMS and Digital Libraries

Unit 1: Foundations to ILMS – Historical Perspective, Need and Purpose - Approaches to Library Automation - Planning and Implementation of Library Automation - Formats and Standards - Retrospective Conversion – Housekeeping Operations – Acquisition, Serials Control, Cataloguing, Circulation – ILMS as Discovery Solutions, Library Management Solutions and Data Services.

Unit 2: ILMS based Innovative and Value Added Services – Alerting Services, Bibliographic Services, Document Delivery Services, Reference Services – Meta-searching and Unified Point of Discovery – Interoperability among ILMSs; ILMS' Seamless Integration with other Systems – Learning Management Systems and E-Learning Platforms.

Unit 3: Digital Libraries: Definitions, Characteristics, Collections – Digital Library Initiatives, Open Archives Initiative (OAI) and similar developments - Design and Organisation of Digital Libraries: Architecture, Interoperability, Protocols and Standards; User Interfaces – Open Data Repositories.

Unit 4: Digital Content Creation and Management: Digitization Process – Methods and Equipment – file formats - Digital Resources Management - Access to Digital Libraries, Storage – Digital Preservation.

Unit 5: Future Trends: Transforming Today's Library/Information Environment to Next-Gen Intelligent and Smart Information Systems – Seamless Integration of ILMS – E-Resource Management Systems, Digital Libraries and Digital Repositories into Single platform/system with unified data and unified workflows.

Public Library System

Unit 1: Public Library: Origin and Growth, Public Library and Society, Public Library services, Public Library systems and their branches, Agencies in the Promotion and Development of Public Library System, Missions, Goals, and Objectives, Library Policies, Procedures, Practices and Legislation of Public Libraries.

Unit 2: Public Library System & Library Buildings: Organizational Structure of Public Library System, Accountability – metrics and outcomes, quality of life and human development, Public Library Standards, Governance and Performance Evaluation of Public Libraries. Public library buildings, resources on building design, green and sustainable building, disasters and public libraries.

Unit 3: Resource Development & Management: Resource mobilization and financial resources, physical and documentary resources, Human Resource Development – interviewing & performance evaluation – continuing education and staff development. Technology in public libraries – application of information technology in public libraries, public librarianship and technology skills, E-resources and digital libraries, Library 2.0 and 3.0.

Unit 4: Community Information System: Understanding the community and assessment of its needs, serving the community, youth and adults services, and public library as the facility to community engagement. Collaboration and partnerships, social responsibly of public library – publicizing programs and services, evaluating services & programs. Bookmobiles & Book Bikes, building engagement, civic & community engagement, libraries transform, outreach strategies, universal access, working with community groups. 30

Unit 5: Collaboration, Consortia and Future Trends: Cooperation with other libraries, Consortia of state libraries, cooperating with the community and other libraries, Types of Library Services, Resource Sharing and Networking, Public Library Scenario in India, UK and USA. Global perspective of public Libraries. IFLA: a global voice for public Libraries.

Preservation and Conservation

Unit 1: Elements of Preservation and Conservation - Need for Preservation and Conservation – Evolution of Writing Materials – Palm Leaves `Birch' Bark, Manuscripts, Print and Non-Print Media – Preservation and Conservation Techniques.

Unit 2: Hazards to Library Materials and Control Measures – Environmental Factors, Biological Factors, Chemical Factors, Disaster Management

Unit 3: Binding – Types of Binding – Binding Materials – Binding Process – Standards of Binding

Unit 4: Restoration and Reformatting – Material Repair – Microfilming and Digitisation of Print Media

Unit 5: Emerging Trends – Digital Archiving, Digital Preservation, Digital Curation, Cloud Storage.

School Library System

COURSE OUTLINE

Unit 1: Mission, Purposes, Legal and Financial Framework for a School Library – Definition and role of a school library, vision and mission statement for a school library, objectives, functions and importance of school libraries. Apply legal and ethical principles/ issues that govern information access, intellectual property rights, and the use of technology tools and online resources. Infrastructure support for school library development, policies, planning, and funding. IFLA/ UNESCO's School Library manifesto, instructional role of a school librarian. 34

Unit 2: Human Resources for a School Library – Definition of a school librarian, roles of a professional school librarian – instruction, management, leadership and collaboration, community engagement, and promoting library services. Staffing roles and rationale, roles and competencies of para-professional school library staff, role of school library volunteers, ethical standards. Concepts, strategies and techniques of administering a school library. Competencies needed to provide school library programs.

Unit 3: Physical and Digital Resources of a School Library – Facilities – location and space, organization of space, physical and digital access. Collection development and management - policies and procedures, issues related to digital resources, collection standards and Resource sharing. Policy development, budgeting, collection development, instructional design, support staff training, facilities design, supervision, and information networking within the school. School library standards.

Unit 4: Programs and Activities of a School Library - Programs and activities, information literacy, reading promotion, media and information literacy instruction, inquiry-based learning models, technology integration, professional development for teachers, and instructional role of a school librarian.

Unit 5: School Library Evaluation and Public Relations – Evaluation of a school library services and programs, evaluation of a school library and evidence-based practice, approaches to school library program evaluation, impacts of school library program evaluations. School library public relations - promotion and marketing, advocacy. access to library services, reference services, personnel, fiscal, collection management, and consortia arrangements. Latest trends in school libraries

Information Representation and Retrieval
COURSE OUTLINE
Unit 1: Information Retrieval Systems: Concept, definition, characteristics, components and functions – Digital IR System – Multilingual IR, Multimedia IR, Intelligent IR and NLP.
Unit 2: Indexing Systems: Problems in subject analysis and representation- Semantics and Syntax. Indexing Language and Vocabulary Control: Thesaurus- Structure, Functions and Compilation. Pre coordinate and post coordinate indexing systems. Keyword Indexing, Citation Indexing, Natural Language Indexing and Automatic Indexing 40

Unit 3: Information Retrieval Models: IR Models- Probabilistic, Cognitive and Vector models. Query formulation and Search strategies – Basic and advanced – Boolean, Truncation and Proximity - Digital IR Systems – Types, Features, File Design and Organisation– Multiple Database Searching – Common Command Language, NISO and ISO Standards, Multilingual/Cross-Lingual IR Systems & Projects – Web Information Retrieval – Meaning, Scope, Characteristics, Models and Standards, Web Indexing, Semantic Web.
Unit 4: Evaluation of Information Retrieval Systems: Meaning, Purpose, Criteria and Levels of IR Evaluation. Major Evaluation Studies – MEDLARS, SMART, STAIRS and Project TREC.
Unit 5: Hands on Practical: Database Searching (Textual, Referral, and Reference)

Research Methods
COURSE OUTLINE
Unit 1: Basics of Research: Concept, Definition, Objectives, Types and Significance – Research Problem – Identification, Selection and Formulation – Literature Review – Sources, Process, and Limitations – Ranganathan's Spiral of Scientific Method.
Unit 2: Research Design: Definition, Need, Types and Components – Hypothesis – Definition, Formulation, Types and Testing – Sampling – Concept and Need of study population and Sampling, Types of Sampling Techniques – Probability and Non- Probability, Derivation of Sample, Sample Bias and Error – Preparation of a Research Proposal – Components and Steps.
Unit 3: Methods and Tools: Survey, Experimental, Case-study, Historical, and Scientific – Sources of Data – Primary, Secondary, and Tertiary – Data Collection Tools - Questionnaire, Interview, Observation, Delphi – Measures and Scaling Techniques.
Unit 4: Statistical Tools: Need and Importance, Descriptive and Inferential Statistics – Measures of Central Tendency – Standard Deviation – T-Test, Chi-Square, ANOVA, Correlation Analysis – Introduction to SPSS.
Unit 5: Presentation and Reporting: Presentation of Data – Creation of Tables, Charts and Figures – Interpretation, Inferences – Deductive and Inductive – Report Writing – Components and Evaluation of a Research Report – Style Manuals – Chicago, MLA, APA – Introduction to Reference Manager – Ethics in Research and Publication.

Soft Skills
Unit 1: Personality Development: Understanding personal strengths and weaknesses, work and organisational psychology – Stress management, Time management and crisis management – Communication Skills – Interpersonal, Intrapersonal, and Group.
Unit 2: Effective Speaking – Elements and types – impromptu speech, memorized speech, manuscript speech, extemporaneous speech – stages and strategies.
Unit 3: Writing Skills – Principles of presentation of ideas – Techniques and tools for effective writing – Internal and External correspondence at the workplace – preparation of a project proposal/research papers.
Unit 4: Workplace Skills – Telephone Skills – Group Discussion - Body Language. Leadership and working in teams – Knowledge Sharing – Team Development.
Unit 5: Job Related Skills – Preparing Personal Profile, Portfolio, Resume – Job Interview – Public Relations; Different types of meetings and Negotiation Strategies.

Ontology
Unit 1: Ontology: Scope, Role of ontologies in Knowledge Management – Architecture for semantic – based Knowledge Management – Tools for ontology – based Knowledge Management.
Unit 2: Ontology Languages: Introduction- OIL and DAML+OIL Semantic web pyramid of languages
Unit 3: Ontology based Knowledge Management: Introduction- Feasibility Study- Kick off phase-Refinement phase- Evaluation phase- Maintenance and Evolution phase.

Unit 4: Resource Description Framework: Introduction – RDF features. Ontology based knowledge management.

Web Technology
Unit 1: Web Technology – An Overview – Internet: History, Features, Services & Protocols – WWW: History, Features, Web Servers, Web Clients – Distributed Information System and Services – Web 2.0, Lib 2.0, Semantic Web, Cloud Computing.
Unit 2: Web Browsers and Services – History, Function, Features of Browsers (IE, Firefox, Chrome)
Unit 3: Mark-up Languages and Scripting Languages – Functions & Features of HTML, XML, DHTML, XHTML, CGI
Unit 4: Websites – Tools and Techniques; Types of Websites, Web contents, Static web contents, Dynamic Web Contents – MySQL, PostgreSQL.
Unit 5: Search Engines – Types, Features, Functions, Evaluation – Search Algorithms – Security Issues – Database Connectivity.

Marketing of Information Products & Services

Unit 1: Information as a Resource - Economics of Information; Information as a product; The range of information products, customers, profiling the information industry, the marketing environment. Pricing Information products and Services.
Unit 2: Concept of Marketing – Marketing Mix; Kotler's Four C's; McCarthy's Four P's, Corporate Mission.
Unit 3: Marketing Research – Branding and Corporate Identity: Marketing Research: Market Segmentation and Targeting; Geographic and Demographic Segmentation; Behavioral and Psychographics Segmentation; User Behavior and Adoption. 51

Unit 4: Marketing Strategies and Planning – Nature and models of marketing strategy and planning; Situation audit and analysis; SWOT analysis, 7S framework, Boston Consulting Group Matrix, Ansoff's Growth Matrix, Product Life Cycle. Performance and Impact Analysis.

Unit 5: Trends in Marketing Library – Role of Social Media in Marketing of Information – Case Specific Strategies.

Knowledge Management

COURSE OUTLINE

Unit 1: **Knowledge Management:** Concept and definitions – Need for Knowledge Management in the emerging and changing business environment – Understanding knowledge; Types of Knowledge – explicit and tacit Knowledge – Knowledge works - changing role of Library and Information Professionals. 53

Unit 2: Knowledge Creation and Capturing: Knowledge creation model – Capturing tacit knowledge
Unit 3: Knowledge Codification and Organization: Knowledge base - knowledge mapping, decision trees, decision tables, frames etc.
Unit 4: Tools and Techniques of Knowledge Management: Neural network, Data Mining.

Electronic Resources Management

COURSE OUTLINE
Unit 1: Electronic Resources: Overview, concept, definition, evolution, need, characteristics, benefits and drawbacks – E-Resource life cycle.
Unit 2: Electronic Resource Management Systems (ERMS): Selecting, acquiring/ subscription/ purchasing, implementation, evaluation and renewing electronic resources/ cancellation. Consortia: Concept, need, purpose & limitations; E-ShodhSindhu: Consortium for Higher Education Electronic Resources. Techniques for Electronic Resource Management (TERMS), Strategic planning for ERM – Media and Format Migration.
Unit 3: Collection Development Process: Formulating policy, budgeting, evaluation of e-resources. Organization & description of resources. Metadata: requirements, types. User awareness and capacity building. Strategic planning for ERM, Electronic usage statistics, standards and guidelines (SUSHI – COUNTER) – LOCKS, CLOCKS 56

Unit 4: Web-based Resources: Scope, types and evaluation. Economics of E-resources – Pricing. Access management of E-resources: authentication and access management of e-resources. Subscription models: copyright, licenses and tactics and terms in the negotiation of e-resources licenses.

Unit 5: Recent Trends in ERM: Future of ERMS, hardware and software changes, user behaviour and expectations, disintegration of the ILS, intellectual property and perpetual access and archiving – Coral.

Informetrics
SOFT CORE COURSES (ANY ONE)
LISC524 – Informetrics 3 Credits
COURSE OUTLINE
Unit 1: Introduction: Concept, definition, need and historical overview and application of Informetrics, Librametrics, Bibliometrics, Scientometrics, Webometrics and Altmetrics
Unit 2: Classical Bibliometric Laws: Zipfs Law, Lotka's Law and Bradford's Law – Application of bibliometric laws.
Unit 3: Growth and Obsolescence of Literature: Various growth models 60

Unit 4: Citation Analysis: Definition, Citation indexing, including bibliographic coupling and co-citation analysis. Formulas for measuring Citations: H-index, Impact Factor, Immediacy index. Citation Indexing Databases and Services: Scopus, Google Scholar, web of Knowledge, others.

Unit 5: **Mapping of Science**: Journal – Journal, Authors, Citation – Mapping Indicators – Mapping & Data Analysis Tools – VOS Viewer, Pajek, Bibexcel, Histcite, etc.

E-Publishing
COURSE OUTLINE
Unit 1: Desktop Publishing (DTP) – History, typography, methods of DTP, DTP software, other hardware and software required – Scanners, Digital cameras, Adobe InDesign.
Unit 2: Types of Documents – Periodicals, promotional, informational, stationary, instructional, and presentations. Layout and design principles, basic elements of popular DTP. Using DTP software – importing and positioning text, understanding typography, enhancing documents with graphics, tables, colours, indexes and tables of contents for large size publications; printing and publishing – proofing, Portable Document Format (.pdf), preflight, etc.
Unit 3: Image Editing – Images (analogue/digital), image processing, common image file formats in publishing - .jpg, .tif/.tiff, .psd, .ai; resolution – monitor, printer, scanner; colors management – RGB, CMYK; image manipulation, adjustment and correction tools and techniques, layering images, channels and masks, adding text, filters.
Unit 4: Web Publishing – Web design and layout concept differences – Head content and location, formatting text, images – file formats, size; enhancing for print vs. web, accessibility and navigation. Adding and configuring audio, creating play and stop buttons. Adding video – setting video playback options, placing video into a document. HTML overlays - adding local HTML content into an overlay – Author Publishing – Aggregator as model of E-Publishing.
Unit 5: Technological Trends – Multimedia publishing, DRM Technology and standards, Internet publishing law, ethics in publishing – copyright, privacy etc.

Intellectual Property Rights
COURSE OUTLINE
Unit 1: Intellectual Property Rights: Concept, definition, purpose and functions of IPR, significance in the present scenario, some important examples of IPR, protection of IPR, genesis and development of IPR in India and abroad.
Unit 2: Different Types of IPR: Copyrights and related rights, Patents, Trade Marks, Industrial Designs, Geographical Indications, Traditional Knowledge, Plant Variety Protection, Biological Diversity, Protection of Integrated Circuits Layout Designs, Protection of Undisclosed Information.
Unit 3: Leading International Laws on IPR: Berne Convention, Universal Copyright Convention, Paris Convention, Patent Cooperation Treaty (PCT), Patent Law Treaty (PLT), GATT, WTO and TRIPS Agreement, Role of WIPO and UNESCO related to IPR.
Unit 4: Management of IP: IP Policies, Licensing, Legal issues, Commercialization of IPR, Initiatives of Government of India towards protection of IPR, Emerging Issues and Challenges of IPR in Internet age.
Unit 5: IPR in Digital Environment: Need and uses, electronic resources licensing, rules and laws governing IPR in India and abroad, its development and amendments – Plagiarism – DRM.

TRIPURA UNIVERSITY
Department of Library and Information Science
Syllabus for **MLIS** Course

ICT APPLICATION IN LIBRARIES – THEORY
Learning Outcomes:
At the end of the Course student will be able to
1. Understand the concept of Library Automation

2. Get familiarity with library automation software

3. Elaborate the automated services

4. Comprehend the concept of library security and related technologies

Unit 1: Library Automaton
Purpose, Planning and Implementation

Library Automation Software: Types and Features

Open Source Library Software: Koha, Greenstone and DSpace

Automation of House Keeping Operations: Acquisition, Circulation, Cataloguing, Serial Control

Unit 2: Automated Services
Electronic Reference Services

Bibliographic and Database Search Devices

CAS/SDI in Automated Environment

Electronic Document Delivery Service

Web 3.0 and Library 2.0

Unit 3: Library Networks and Consortia
Objectives, Scope and Characteristics

Major Library Networks: INFLIBNET, DELNET, OCLC

Library Consortia: UGC-Infonet, INDEST, CSIR E-Journal Consortia

Unit 4: Library Security Technology
Barcode

RFID

CCTV, Biometrics, Smartcard

INFORMATION SYSTEMS AND NETWORKS

Unit 1: Information Systems
Definition, Types and Characteristics

Information Organization and Systems

Planning and Designing of Information System

Evaluation of Information System

Unit 2: National Information System
ENVIS

BIS

PIS

Unit 3: Global Information System
AGRIS

INIS

INSPEC

MEDLARS

WIPO

RESEARCH METHODS
Learning Outcomes:
At the end of the Course student will be able to

1. learn the basics of research and research methodology in terms of types, forms, formulation research problems

2. formulate objectives, hypotheses, research design, and literature search

3. apply different data collection methods and analyzing the data through different statistical techniques

Unit 1: Research and Research Design
Concept, Meaning, Need, General Characteristics and Process of Research

Types of Research: Fundamental and Applied, Other Research Approaches

Research Design, Types of Research Design, Research Plan

Formulation of Hypothesis, Testing of Hypothesis

Literature Search: Print, Non- Print and Electronic Resources

Unit 2: Research Methods
Scientific Method

Historical Research

Survey Research and Case Study Method

Experimental Research and Delphi Technique

Unit 3: Data Analysis and Interpretation
Data Collection Tools: Questionnaire, Interview, Observation and Sampling

Data Presentation: Tables, Charts/Graphs

Statistical Techniques/Interpretation of Data: Frequency Distribution, Measures of Central Tendency, Time Series Analysis, Measures of Dispersion, Correlation, Regression Analysis and Analysis of Variance

Statistical Inference

Use of Statistical Packages

Unit 4: Bibliometric Methods and Report Writing
Bibliometric Studies: Meaning, Scope and Parameters

Bibliometric Laws and Their Applications

Preparation of Writing of Research and Report (Theses and Dissertation)

Guidelines for Research Reporting

ICT APPLICATION IN LIBRARIES – PRACTICAL

Unit 1: Hands on Experience of Windows Operating System Unit 2: Hands on Experience on Application Software:
Drafting Letters and Issuing Reminders (with MS-Word)

Preparation of Accession Register (with MS-Excel)

Preparation of Presentation (with MS-Power Point)

Unit 3: Hands-on Experience on Library Software
Integrated Library Software: Koha/SOUL

Unit 4: Viva Voce
\ INFORMATION LITERACY
Learning Outcomes:
At the end of the Course student will be able to
Understand the importance of evaluated information

Evaluate any source of information

Evaluate any media message

Evaluate search engines

Unit 1: Growth and Development of Information Literacy
Information Society and Information Literacy

Information Literacy: Definition, Models and Standards

Information Literacy: Strategic Plan

Information Literacy and Lifelong Learning

Unit 2: ICT and Media Literacy
Computer Literacy and E-Literacy

Digital Literacy

Information Literacy and Bridging the Digital Divide

Information Literacy and Media Literacy

Unit 3: Information Literacy and Libraries
School, College and University Libraries

Public Libraries

Special Libraries

Information Literacy and LIS Education

Unit 4: Policy and Advocacy
Information Literacy: Initiatives and Forms in USA, UK and Australia

Policies and Guidelines: UNESCO, IFLA and ALA

Information Literacy: Skills and Competencies

Information Literacy: Best Practices

Name of the Course: COMMUNITY INFORMATION SERVICES
Unit 1: Community Information Services

Community Information: Definition, Scope and Origin

Need and Sources for Community Information in Society

Role of Libraries in Community Information

Community Information in USA, UK and India

Unit 2: Community Information Services
Community Information Services: Meaning, Types and Target Users

Community Information Centres: Planning and Role of Information Services

Community Information Services to Specific Community
>   Rural, Urban and Metropolitan Communities
>
>   Industrial Business Communities
>
>   Academic, Research, Institutional and R & D Communities
>
>   Physically, Mentally Disadvantaged Communities
>
>   Children, Old People and Illiterate

Name of the Course: PUBLIC LIBRARY SYSTEM

Unit 1: Public Library Development
Public Library: Social and National Development
UNESCO Contribution for Public Library Development
Administration of Public Libraries
National Agencies for Public Library Development
Library Legislation
Unit 2: Public Library Services
Library Services: Types

Public Libraries as Knowledge Centres

Changing Dimensions of Public Library Services

Evaluation of Public Library Services

Unit 3: Public Library: Resource Development
Resource Mobilization in Public Library

Public Library Finance

Information Resource Development for Public Libraries

Human Resource Development in Public Libraries

Unit 4: Public Libraries: Trends and Development
ICT Applications in Public Libraries

Resource Sharing and Networking

Changing Scenario of Public Libraries in India, UK & USA

Web based Public Library Services

Name of the Course: ACADEMIC LIBRARY SYSTEM

Unit 1: Academic Library: Functions and Services
Role of Academic Library in Higher Education

Academic Library Services

Academic Library Manageme

Role of UGC for Academic Library Development

Unit 2: Resource Development

Physical Resources including ICT Infrastructure

Human Resource Development

Financial Resource Development

Unit 3: Collection Development

Collection Development, Write-off and Weeding out policy

Problems in Collection Development

Role of Library committee in Collection Development

Unit 4: Staff Development and Continuing Education

Staffing Norms and Standards

Continuing Education program for Academic Libraries

Personnel Management

Name of the Course: PERSONALITY DEVELOPMENT

Unit –I Self-Awareness

Tracing the roots

Building confidence and boosting enthusiasm

Promoting a zealous outlook towards life

Imbibing positive thoughts and actions

Unit –II Communication Skills

The Basic

Forms of communication

Understanding body language

Social skills

Unit – III Workplace Skills

Presentation skills

Telephone skills

Group discussion skills

Adjustment

Work ethics

Unit-IV Writing Skills

Basics of writing

Internal and External correspondence at the workplace

Basics of writing proposals

Writing reports

Name of the Course: INFORMATION RETRIEVAL

Unit 1: Information Retrieval Systems

Definition, Types, Components of ISAR Systems

Elements of File Organization

Artificial Intelligence and Expert System

IR Models

Unit 2: Subject Representation and Indexing Languages
Alphabetical Subject Representation

Contribution of Cutter, Kaiser, Ranganathan, Farradane and Coates

Characteristics of Indexing Languages

Vocabulary Control-List of Subject Headings, Thesaurus and Thesaurofacet, Classaurus

Unit 3: Indexing Systems and Techniques
Pre-Coordinate Indexing System: Chain Indexing, PRECIS, POPSI

Post-Coordinate Indexing System: Uniterm Indexing System

Title Derived Indexing System: KWIC, KWOC and KWAC

Citation Indexing: Science Citation Index, Social Science Citation Index

Automatic Indexing: COMPass

Unit 4: Information Searching and Evaluation
Search Methods and Search Strategy, Boolean Search

Online Search Techniques

Information Searching in different media: Print Media and Internet

Need and Parameters of Evaluation

Retrieval Performances: Recall and Precision Ratio

Name of the Course: DIGITAL LIBRARY THEORY AND PRACTICE
Unit 1: Content Management and Digitization
Content Development: Concept; Content Creation & Organization

Content Development & Maintenance using Dreamweaver

Digitization Tools, Digitization Process, Digitization File Formats

Unit 2: Digital Library Creation
Digital Library & Institutional Repository: Concepts; Digital Library Initiatives (National & International)

Digital Library Software (s)

PRACTICAL
Unit 3: Content Management & Digitization Practice
Hands on Practice of Library Website Designing using Dreamweaver

Hands on Practice of Scanner, Digital Camera and OCR

Unit 4: Digital Library Practice
Hands on Practice of Digital Library Creation using DSpace and Greestone

Creation of Communities & Collection, Submission Process

Name of the Course: DISSERTATION AND VIVA-VOCE
Learning Outcomes
At the end of the Course student will be able to
Write research proposal

Understand data collection methods

Analyse data

Face interviews

Dissertation
Every student shall have to choose a topic for the dissertation in the beginning of the first semester and preliminary preparation carried out under the guidance of a teacher. The final prepared dissertation to be submitted to the department/university before the commencement of the second semester for evaluation jointly by the external and internal examiners followed by a Viva-Voce. 1 4

Name of the Course: KNOWLEDGE MANAGEMENT

Unit 1: Knowledge Management
Concept of Knowledge Management

Scope of Knowledge Management

Types of Knowledge Management (Explicit Knowledge & Implicit Knowledge)

Unit 2: Knowledge Management: Creation & Tools
Knowledge Creation, Access, Transfer and Sharing

Knowledge Tools

Knowledge Networks

Decision Making

Unit 3: Pre-requisites of Knowledge Management
Sharing of Expertise

Knowledge Mapping

Knowledge Worker

Value Added Knowledge

Unit 4: Benefits and Challenges of Knowledge Management
Benefits and Challenges of Knowledge Management

Pioneers in Knowledge Management

KM Initiatives in Indian Organization

Software for Knowledge Management

Trends and Challenges in Knowledge Management

Name of the Course: E-RESOURCE MANAGEMENT
Learning Outcomes
At the end of the Course student will be able to
Deal with various E-resources

Get an idea about E-resources in different disciplines

Understand the importance of open access E-resources

Unit 1: Types of e-Resources
E-Books

E-Journals

Consortia based e-resources

E-Reports

ETD

Internet Resources

Open Source
Unit 2: Internt Resources
Science & Technology

Humanities

Social Science

Evaluation of Internet Resources

INFORMETRICS AND SCIENTOMETRICS

Unit- 1
Bibliometrics, Informetrics, Librametrics, Scientometrics, Altmetrics

Concept, definition, need, Scope & Parameters

Bibliometric Laws & their Applications

Unit- 2
Citation analysis, Impact Factor, Online citation index

Concept of citation analysis, Formulas for measuring Citation

H-index, I_{10}- index, G-index

Impact factor: concept, need, Formulas for measuring impact factor

Citation Indexing: Citation Databases and Services: Web of Science; Scopus, ICI, Google Scholar

Unit-3
Hands on Practice using Bibexcel and Pajek Software
At the end of the Course student will be able to
Get familiar with concepts of Intellectual Property rights

application of copyright

understand the laws of IPR

know about geographical indicators, Copyleft, Trademark

Intellectual Property Rights (**IPR**)
Unit 1: Intellectual Property Rights
Concept of IPR

Different Categories of IPR

Enforcement of IPR

IPR Acts and its Application in Electronic Environment

Unit 2: Copyright
Meaning and Scope

Copyright Law and Related Issue

Rights to copyright owner

Copyrights and Patent Right

Licensing of Copyright

Copyright Act and its Application in Electronic Environment

University Of Hydrabad

**POST-GRADUATE DIPLOMA IN LIBRARY
AUTOMATION AND NETWORKING (PGDLAN)**

Course Structure:
Term - I
Note: Courses DCL 412 & 415 are compulsory. Two
Optional Courses from the remaining four are to be taken to
complement the knowledge of the participant.
DCLIPR 411 : Introduction to Computers & Personal
Productivity Software
Part I : Introduction to Computers andh Programmin
in C
Part II : Personal Productivty Software
DCLIPR 412 : Computer Network, Internet Tools and
Security Management
Part I : Computer Networks and Internet Tools
Part II : Network Security Management
DCLIPR 413 : Legal Organizational Structure /
International Organizations
Part I : Legal Organizational Structure andh
Constitutional Law
Part II : International Law, International Economic
Law, International Organizations
DCLIPR 414 : Introduction to Business Laws and Laws
of Crime
Part I : Business Laws
Part II : Criminal Laws & Torts
DCLIPR 415 : Introductions to IPR and TRIPS
Part I : Introduction to Intellectual Property Rights
with WIPO Orientation
Part II : Trade Related Intellectual Property Rights
DCLIPR 416 : Introduction to E-commerce, E Banking
and E-Governance
Part I : Introduction to E-Commerce & E-Banking
Part II : Introduction to E-Governance

Term – II
DCLIPR 421 : Cyber Crime & Cyber Forensics:

Advanced Topics with relevant
Provisions of IT Act- 2000.
Part I : Cyber Crime & IT Act.
Part II : Cyber Forensics
DCLIPR 422 : Part-I: Electronic Records / Digital
Signatures & Certificates / Certifying
Authorities / IT Act 2000
Part-II: Digital Signatures Specialized
Topics
DCLIPR 423 : Cryptology & Public Key Infrastructure /
IPR Issues in Integrated Circuits,
Software and Data Protection
DCLIPR 424 : International Law Copyright and Related
Rights
DCLIPR 425 : International Law of Patents,
Trademarks and Industrial Designs
DCLIPR 426 : Project Work on Specialized topic

Course Code: 1009E
Name of the Course: PRESERVATION AND CONSERVATION OF LIBRARY MATERIALS
Learning Outcomes
At the end of the Course student will be able to
Get familiar with concepts of preservation and conservation of library materials

Preserve Non-Print Materials such as Palm leaves and manuscripts

Learn about hazards in libraries and how to fix them

Learn about binding process

Unit 1: Preservation and Conservation: Overview
Preservation and Conservation: Historical Development, Need and Purpose

Preservation of Print Materials: Books, Periodicals, Pamphlets

Unit 2: Preservation of Non-Print Materials
Palm Leaves

Manuscripts

Films

Floppies and Disks

Unit 3: Hazard to Library Materials and Control Measures
Environmental Factor (Temperature, Humidity, Water, Light, Air Pollution, Smoke, Dust, etc.)

Chemical Factors

Unit 4: Binding
Types of Binding of Library Materials

Binding Material and Their Varieties

Binding Process
Standards for Library Binding

DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
SIKKIM UNIVERSITY

Foundations of Library and Information Science
Unit I
Definition/attributes of Data, Information and Knowledge; Information Transfer Life Cycle: Generation, Storage and Dissemination; Concept, Definition, Purpose, Role, and Functions of Library. Historical development of libraries in India. Types of Libraries. Five Laws of Library Science. Philosophy of Librarianship: Nature, Scope, History, Role and Professional Ethics. Unit II
Library Legislation and Acts: Need and Feature, Library Legislation in India; Model Public Library Act, The Press, and Registration of Books Act: Delivery of Books (Public Libraries Act) 1954 and Latest Amendments; Intellectual Property Rights; Copyright Act; RTI Act,

Information Technology Act. Digital Millennium, committees, and commissions on libraries
Unit III
Information and Knowledge Society; Features of Information and Knowledge Society, Knowledge Economy. National Knowledge Commission of India, National Mission on Libraries, UNESCO Public Library Manifesto, IFLA Public Library Guidelines. Unit IV
Library Associations and Information Centers: ILA, IASLIC, RRRLF, INFLIBNET, DESIDOC, DRTC, NASSDOC, NIScPR, National Library of India, NDLI, CILIP, Library of Congress, British Library, IFLA, ASLIB

Information Sources, Services and Literacy

Unit I
Information Sources: nature, characteristics, format and types ; Primary, secondary, tertiary sources of information. Print and Electronic Sources (Documentary and Non-Documentary Sources); Finding Information from fact finding sources such as dictionaries, encyclopedias, year books, directories, gazetteers, biographical dictionaries (Who's who), Bibliographical Sources (INB, BNB, Trade bibliographies), Geographical Sources, Evaluation criteria of reference sources. Unit II
Web Resources; Subject Gateways; e-books; e-journals; DOAJ and DOAR, Forum, Bulletin Board, Electronic & Web Publishing, Electronic Media; Searching information from web resources Unit III
Information needs, and methods of user study. Types of users and their needs. Information Seeking Behavior (ISB); Theory and models. Reference Process; Reference Services: Concept; Purpose, Theories. Indexing and Abstracting Services; Document Delivery Services; Unit IV
Information literacy: role, scope, methods, standards, models. E-learning: theories, principles, scale, standards, services and initiatives. GOI Digital Initiatives in Higher Education (SAWAYAM; NPTEL); Role of the library in promoting information literacy; Tools and Techniques used to deliver information literacy; Online Services (Library Apps, SMS alert, RSS Feed. Library networks.

Information and Communication Technology Applications

Unit I
Information Technology Concepts; Computer Fundamentals; Different Components of Computers; Hardware, Software; System Software; Operating System (Windows, Linux); Privacy, Security, Proxies, Firewalls. LAN and Internet IP addresses, subnet masking, RFC-1918, DNS, Gateway, SSH, SFTP,
Unit II
System Software: Compilers, Interpretors, Overview of Programming Languages; Application Software: Word; Excel; PowerPoint; Open Source Software, github, sourceforge
Unit III
Fundamentals of Internet: Meaning, Purpose Function; Hypertext, HTML, XHTML, XML, XSLT, CSS, JSON. Database Management Systems: MySQL or PostgreSQL. Character Encoding: ASCII and UNICODE, Multimedia Files Formats.
Unit IV
Search Engines: Type and Architecture: Boolean Operators; Simple and Advanced Search features (Google as example); Clusty search engine, Advanced features of Browsers; Evaluation of Search Engine (Recall and Precision), Communication Technology: Introduction to Gsuit and Google Products (Email; Google Drive; Google Documents), Social Networking meaning & purpose. Advantage and Disadvantage

Knowledge Organization and Arrangement: Library Classification (Theory)
Unit I
Universe of Subject; Modes of formation of subjects and knowledge. Simple, Compound and Complex Subject; Knowledge and Subject Classification: Definition, Need, Purpose and Importance. Simple Knowledge Organization System (SKOS), Mapping and division of knowledge in various schemes of Library Classification with special reference to DDC, UDC and Colon Classification. Unit II
Theoretical foundation of Library Classification by W C Berwick Sayers, H E Bliss, S R Ranganathan. ISKO: Historical Perspectives. General Principles and devices of classifying documents. Unit III
Notation System, Call numbers, Class numbers, Book numbers, Faceted Classification, Postulational approach to classification, Principles of helpful sequence, Five Fundamental Categories and facet analysis and facet sequence. Shelf Arrangement, Shelf List, Arrangement of Special Collection Unit IV
Online Classification Systems, Web Dewey, OCLC Classifier, Recent development and trends in classification research, Automated classification

Knowledge Organization and Arrangement: Library Classification (Practice)
Unit I
Classification of Documents of simple subjects by Colon Classification; Basic Subjects; Complex Subjects; Devices; Common Isolates; Space, Time, Language Isolated Use of Devices Unit II
Classification of Documents of simple subjects by Universal Decimal Classification; Unit III
Classification of documents of complex subjects by DDC latest edition available with the use of tables and devices. Unit IV
Copy classification (Use of already worked out class number of books for Main Class, Division, Sections) Construction of Book Number and Call numbers

Library Management and Operations
Unit I
Concept of Library Management - Principles and practices. Scientific management; MBO, SWOT Analysis. Personnel Management: Staffing Pattern and Nomenclature, Manpower Planning: Job Analysis, Job Description, Job Specification, Performance Evaluation, Leadership and Motivation Unit II
Project Management: PERT/CPM. Quality management and certification. Risk management, Disaster management and Change management. Library Budget and Finance: Planning, Standards and Allocations. Library Building: Design, Planning and Furniture. Functional/Modular Library Building. Green Library Building. Unit III
Resource Management: Principles and theories of collection development. Patron Driven Acquisition Module. Selection tools and techniques of print and e-resources. Finance, budgeting and accounting, Selection of book suppliers and their empanelment. Pricing policies and discount. Agreements with product suppliers and terms and conditions of supply. Licensing and pricing models of supply of online resources. Ordering, receiving and technical processing of books and other information products. Unit IV
Maintenance: shelf reading and rectification. Stock verification, library statistics, annual report; User Management: Circulation Control: Registration, issue, return, online renewal, reservation; Furniture and equipment. Binding.

Digital Library and Content Management System
Unit I

Concept of Digital Libraries; Historical Developments of Digital Libraries; Component and Elements of Digital Libraries (Digital Objects – Text, Image, Audio, Video); Networks; Digital Library Features Unit II

Digital Library Developments, Architecture and Workflow: Open Archival Information System (OAIS) model, Archival Information Package (AIP), Submission Information Package (SIP), Dissemination Information Package (DIP); Digital Curation (DCC), Search Facilities: Lucene Search Engine; User interface. Digital Information Organization and Identifiers; Open Standards: OAI-PMH, OAI-ORE, REST, SWORD; Metadata Standards: Dublin Core, Qualified Dublin Core, ANSI/NISO etc. Unit III

Collection Development and Preservation, Content Selection, Digitization, Techniques, Software, OCR, Institutional Repositories – Concepts and Application; Collection Development Policies; IPR – Copyright, DRM, Preservation Metadata: PREMIS; Handles CNRI, DOI, Registry of Digital Repository (Open DOAR); Digital Library Software: DSpace Greenstone, EPrints; Major Digital Library Initiatives (National and International); Unit V Digital Content Creation – Concept, Process and Methods; Content Management System:,

Library Automation and Networking
Unit I
Introduction to Library Automation; Historical Perspective, Need and Purpose; Approaches to Library Automation Unit II
Management of Library Automation: Planning; Library Automation Software; Choosing Library Automation Software; Evaluation of the Software; Implementation; Open Source Library Automation Software (KOHA); Propriety Software (SOUL) Unit III
Automated Housekeeping Operations: Acquisition; Cataloguing; Circulation; Serial Control; Budget; Reports; Retrospective Conversion; Data Migration Unit IV
Computerised Information Services and Networking: Computerized Alerting Services; Automated Cataloguing; SDI Automation; Z39.50; MARC; Network Software; Web Based Automation (Cloud based)

Knowledge Organization and Description: Library Cataloguing (Theory)
Unit I
Catalogue its types and functions, Document description according to AACR-2, Cataloguing of various types of information resources (printed, non-printed and electronic), Introduction to CCC. Unit II
RDA, Standards for Machine Readable Bibliographic Records – ISO 2709/Z39.2/Z39.50 and the MARC family of Formats, XML, role of Law of Osmosis and Retro conversion, Standards for Bibliographic Organization, ISBDs, FRBR. Dublin core. ISSN, ISBN.
Unit III
Subject cataloguing and content analysis. Latest editions of Library of Congress Subject Headings List (LCSHL), Sears List of Subject Headings (SLSH), Chain Indexing, Thesaurus, Thesauro-facet. Unit IV
Preparation of bibliographic records, Use of ISBN, ISSN, Copy cataloguing from Library of Congress, Columbia University Catalogue, British Library, OCLC and other national and international catalogues, Indexing and abstracting. Web OPAC and its functions, BIBFRAME, Centralized and Cooperative Cataloguing: OCLC, WorldCat, IndCat, NERCAT

Knowledge Organization and Description: Library Cataloguing (Practice)
Unit I
Preparing Catalogue Entries as per AACR-2 (Main Entry; Added Entry

With Various Authorship; Single Personal Authorship; Joint Authorship; Works of more than three Authors; Collaborative Works, Pseudonymous Authors, Unit II
Corporate Authorship (Government, Organizations, Institutions, Societies); Series; Multivolume Works; Composite Works; Uniform Titles; Sacred Scripture ; Anonymous Works Unit III
Preparing Catalogue Entries (Main, Added and Reference Entries) for Non-Book; Materials using Anglo American Cataloguing Rules -2 revised edition; Serials; Unit IV
Non Book Materials : Cartographic Materials; Manuscript; Motion Pictures, Video Recording, Devices

Information Storage and Retrieval
Unit I
Information retrieval system: concept, definition and components.
Content analysis and representation (ISBD; Metadata – MARC; Dublin Core), Contribution of Cutter, Kaiser, Ranganathan and E J Coates. Text retrieval models. Unit II
Indexing and abstracting systems: Introduction to Subject Indexing Language. Pre-coordinate (PRECIS) and post-coordinate indexing (POPSI), KWIC, KWOC, KWAC Unit III
Vocabulary control: Thesaurus and Thesaurofacet-Definition, purpose and construction; Information Retrieval Models and Queries; Evaluation of retrieval systems such as Precision, Recall, etc. Unit IV
Information System and Databases; Searching and Retrieval: Search strategy and formulation, Truncation, Filtration, Boolean logic, Federated search, Web based retrieval, Free text search. Searching Databases such as Web of Science; SCOPUS, J-Gate; EBSCOHost; PubMed, AGRIS. Semantic Web, Ontology, Linked Data, Big Data, Data Mining, Natural Language Processing,

Electronic Resource Management
Unit I
Overview of Electronic Resources: Introduction, Types of Electronic Resources, Emergence and Entrenchment of Electronic Resources in Libraries, Unit II
Acquisition and Selection of Electronic Resources: Collection Development, Acquisitions of Electronic Resources, Technical services, and systems, Consortia Model of Electronic Resource Acquisition and Licensing, Vendor Selection, Negotiation and Contracting, Maintaining, and Renewing Electronic Resources; Deselecting Electronic Resources, Unit III
Access Management: Linking, Parsing, and Access, Generating Title Lists, Linking and Discovery Tools, Delivering, Branding, Marketing, User Training, Digital Rights Management, Preservation of Electronic Resources – LOCKS, CLOCKS Unit IV
Usage Control and Maintenance: Administrative Interfaces; Authentication; Proxy Servers, Remote Logins Electronic Resources Usage: COUNTER and SUSHI, Observation Logs, Copyright, Fair Use,

Research Methodology and Scholarly Publishing
Unit I
Basics of Research: Meanings, objectives, types and significance, Research Problem: Identification and Selection. Ethics in Conducting Research. Research Design: Basic principles of Research Design. Hypotheses Formulation, Types of Research Design and Sampling Techniques. Unit II
Methods of Data Collection and Analysis: Questionnaire, Interview, Observation and Case Study. Data Representation: Tabulation, Analysis and Inferencing. Data Validation. Descriptive and inferential statistics, Measures of Central Tendency, Standard Deviation, T-

test, Chi-square, ANOVA, Correlation and Regression Analysis. Statistical Software – SPSS; R Programming Unit III

Elements of Academic Writing; Writing a Scientific Paper; Citation and Reference Management; Selection of Research Publishing Platforms; Research Impact Assessment and Metrics - Meaning and Purpose; Unit IV

Publication Ethics & Misconduct. COPE and WAME. UGC Guidelines (2018); Plagiarism and Plagiarism Detection Software – URKUND (OURIGINAL), TURNITIN

Research Data and Content Literacy

Unit I

Introduction to Data Science and Big Data; Data Types, Data Models, Characteristics of Data; Sources of Data, Open Data, Five Star Data, Organizations involved dealing with Data related issues such as WDS, ICSU/CODATA, RDA etc.; FAIR Principles Unit II

Metadata for Data, Domain Specific Metadata of Data; Ontologies related Data; Data Citation, Linked Open Data (LOD). Unit III

Research Data Management, (RDM), Data Management Cycle; Data Management Plan (DMP), Government Data, RDM Steps; Data Curation and its workflow. Publishing Data, Data Repositories, Licenses related to Data; RDM Tools – Analyzing; Visualizing, Bibliographic Unit IV

Research Data and Content Literacy – Steps of Data & Information Literacy (research data skills), Identify, Classify, Organize, Provide;' Models; data management competences; Practice: Bad Data, Software for Cleaning Messy Data – OpenRefine; Extract, Transform, Load (ETL) software – Talend; Software for Data Repositories: CKAN, dataVerse; Research Data Repository – Figshare, Zonedo\

Social Science & Humanities Information Systems and Services

Unit I

Patterns of Development of Knowledge : Humanities & Social Science; Developments in Major Subjects of Humanities and Social Science – Psychology, Philosophy, Geography, Law, Sociology, Political Science, History, Economics Unit II

Sources of Information in Humanities and Social Sciences

• Primary Sources of Information: Their Types, Characteristics & Role with Emphasis on Periodicals, Research Reports, etc.

• Secondary Sources of Information: Their Types & Characteristics–Bibliographies, Indexes and Abstracts, Encyclopaedia, Year books etc.

• Evaluation of Important Secondary Sources from the view of their Information Value

• Databases in Social Sciences Unit III

Information Centers and Organizations of Humanities and Sciences, Specific Roles of National and International Organizations

Unit IV

User Assessment, Resource Requirement and Information Retrieval. (i) Content Analysis; (ii) Condensation; (iii) Consolidation; (iv) Compilation; Information Seeking Behaviour of Different User Groups of Humanities and Social Science Discipline

Engineering & Medical Sciences Information Systems and Services

Unit I

Patterns of Development of Knowledge: Science, Technology, Engineering and Medical Science; Developments in Major Subjects of Engineering and Medical Science – Engineering, Computer Science, Information Technology, Medical Science, Nursing, Pharmacy; Agriculture) Unit II

Sources of Information in Science, Engineering and Medical Science
• Primary Sources of Information: Their Types, Characteristics & Role with Emphasis on Periodicals, Research Reports, Patents, Specifications etc.
• Secondary Sources of Information: Their Types & Characteristics–Bibliographies, Indexes and Abstracts, Encyclopaedia, Year books etc.
• Evaluation of Important Secondary Sources from the view of their Information Value Unit III
Information Centers and Organizations of Science, Engineering and Medical Science and Their Role; Agricultural Information System; Databases (Engineering; Medical; Agriculture); Medical Information System
Unit IV
User Assessment, Resource Requirement and Information Retrieval. (i) Content Analysis; (ii) Condensation; (iii) Consolidation; (iv) Compilation; Information Seeking Behaviour of Different User Groups of Engineering and Medical Science Discipline

Tribal Information, Archive, and Museum
Unit I
Tribal Community in India; Community Needs: Assessment and Planning; Governmental and Non-Governmental Information Sources and Services for Tribes; Tribal Library and Management Unit II
Tribal Information: Mission, Goal; Objectives
Traditional Knowledge; Content Curation; Budgeting and Financial Management; Cultural Heritage: Concept, Purpose and Management, Govt Initiatives to Promote Tribal Information, Culture and Heritage Unit III
Libraries and Tribal Community; Tribal Libraries and Information Centres in India; Digital Collection; Managing Audio Visual Collection; ICT Applications; Traditional Knowledge, Traditional Knowledge Management, Intellectual Property Rights in Traditional Knowledge Unit IV
Archives and Museums: Meaning and Purpose; Process of Developing Archives; Archiving Policies and Procedures; Functions and contents of Tribal Archives
Museums: Meaning and Purpose; Activities; Collections; Managing Museum Collection; Preservations; Cataloguing of Collection in Museums; User Services
National Museum, Tribal Research Center Assam, Namgyal Institute of Tibetology, etc (Local and National Importance), Assam Institute of Research for Tribals and Scheduled Cast, Assam

Knowledge Management and Information Systems
Unit I
Knowledge Management Concept and Scope – Definition, types, role, principles, tools, components and architecture. Types of Knowledge, KM Systems; Knowledge creation and knowledge architecture – Nonaka's model. Unit II
Tools of Knowledge Management
Information Management Vs Knowledge Management; Role of Librarian in Knowledge Management; Information System – Meaning and Purpose
National and International Information Systems such as NIScPR, ENVIS, INIS, INSPEC, ERIC, Patent Information System, Biotechnology Information System (BIS), Agriculture Research Information System). Unit III
System analysis and design. Data and information management systems. Information consortium: National Knowledge Resource Consortium (NKRC), ERMED, CeRA

(Consortium on e-Resource in Agriculture), DeLCON, e-ShodhSindhu, N-List. Managing knowledge workers Unit IV

Capturing tacit knowledge–methods; Knowledge codification– tools and procedures; Knowledge testing; Knowledge transfer. Knowledge Transfer and Sharing.

Bibliometrics, Informetrics and Scientometrics Course Code

Unit I

Introduction and need of metric studies in scholarly communication. Evolution of metric studies (From Librametrics to Knowledge geometry); Types of metrics eg: Bibliometrics, informetrics, Scientometrics, Webometrics, Altmetrics. Concept, need and types of scientific collaboration. Unit II

Law of scattering (Bradford's law). Zipf's law, Lotka's law, Generalised bibliometrics distributions and Fitting of Informetrics models: Bradford's curve, Leimkuhler's distribution, etc.80-20 rules, Price's law relating to scientific productivity, Aspects of concentration measures; Circulation Statistics. Unit III

Citation Analysis & Citation indexing. Journal level metrics (Impact Factor; SNIP; SJR); Impact Calculation - H and G Indexes calculation. Standard Citation Indicators (MOCR, FECR and MECR). Relative citation Indicators (NMCR and RCR); bibliographic coupling and co-citation analysis. Citation Databases: Scopus, Web of Knowledge, PubMed, Google Scholar. Author Level Metrics Unit IV

Growth and obsolescence of literature: Various growth models; the half-life analogy, Determinations of aging factor and half-life: real vs apparent; synchronous vs diachronous. Mapping and Science Indicators, Mapping of science, Science indicators. Alternative Metrics; Author Profile (Google Scholar; SCOPUS ID; ORCID; Researcher ID; IRINS), Mapping Software (HistCite, Publish or Perish, VOS Viewer, Bibliometric Analysis using Bibliometrix of R Programming)

Public Library Systems & Services

Unit I

Public Library: Concept, Need, features; objectives, and functions.

Public Library Movement in India – Post-Independence Period; Role of Government and other agencies in the Development of Public Libraries: UNESCO, IFLA, Raja Rammohun Roy Library Foundation and National Mission on Libraries including National Knowledge Commission. National Policy for Library Development in India, Library Legislation Unit II

Public Library: Organizational Structure; Administration; Financial Management. Human Resource Development & Management in Public Libraries. Staffing Pattern in Public Libraries. Evaluation of Public Library System. Unit III

Collection Development: Nature, Types, and Policies. Factors of Collection Development. Problems in Collection Development and Collection Organization. Electronic Resource Selection and Acquisition; Collection for Special Categories of Users: Children, Young Adults, Senior Citizens, Differently Abled People, Public Library Services. Unit IV

Services in Public Libraries; Resource Sharing in Public Libraries. Needs and Objectives of Resource Sharing. Integrated Public Library system. Case study of some of the prominent Public Libraries in India: National Library of India – Kolkata, The State Central Library - Mumbai, Kolkata & Sikkim, Connemara Public Library-Chennai; Delhi Public Library; Khudabaksh Oriental public Library - Patna. Extension Services (Author talk, book clubs etc), Out reach services (mobile libraries)

Academic Library Systems & Services

Unit I

Academic Libraries: Concept, Need, Features; Objectives, and Functions. Post-Independence Development of Academic Libraries in India. Role of UGC and other Bodies in Promoting Academic Libraries in India. Unit II
Academic Library: Administration; Financial Management. Collection Development: Nature, Types (School, Higher Ed), and Policies. Factors of Collection Development. Problems in Collection Development and Collection Organization. Academic Library Services. Unit III
Human Resource Development & Management in Academic Libraries. Staffing Pattern in Academic Libraries. Evaluation of Academic Library System. Role of Academic Library in Accreditation and Ranking; Library Building Planning and Standards Unit IV
Resource Sharing in Academic Libraries. Needs and Objectives of Resource Sharing. Role of Library Networks and Consortia in promoting and strengthening Academic library system and services. Role of INFLIBNET Centre in Developing Academic Libraries (Specially in NE Region), Study of some of the prominent academic libraries in India: University Libraries (Central & State Universities).

Special Library Systems & Services
Unit I
Special Libraries: Concept, Need, Features; Objectives, and Functions. Development of special libraries in India. Role of Special Libraries Associations in promoting and strengthening Special Library system and services Unit II
Special Library: Administration; Financial Management. Collection Development: Nature, and Policies. Factors of Collection Development. Problems in Collection Development and Collection Organization. Special Library Services Unit III
Human Resource Development & Management in Special Libraries. Staffing Pattern in Special Libraries. Evaluation of Special Library System Unit IV
Resource Sharing in Special Libraries. Needs and Objectives of Resource Sharing. Research Sharing Networks: RLIN, OCLC, etc. Value of Information, Evidence-Based Librarianship. Study of some of the prominent special libraries in India: Legislative Libraries, Govt Libraries, Corporate Libraries, Library for Differently Abled Persons

DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
UNIVERSITY OF DELHI
The Department offers the following programmes:
• *Bachelor of Library and Information Science*
• *Master of Library and Information Science*
• *Master of Philosophy*
• *Doctor of Philosophy*

B.L.I.Sc.
LIBRARY, INFORMATION AND SOCIETY*
UNIT – I: Role of Libraries
Library as a Social Institution
Development of Libraries in India
Role of Library and Information Centres in Modern Society
Five Laws of Library Science
UNIT– II: Types of Libraries, Professional Associations and Organizations
National Library of India: Concept, Functions and Services
Public Libraries, Academic Libraries and Special Libraries
Professional Associations: ILA, IASLIC, CILIP, ALA, Aslib, SLA
National and International Organizations: RRRLF, UNESCO and IFLA
Digital Libraries

UNIT – III: Library Legislation
Library Legislation: Need, Purpose, Objectives and Model Library Act
Library Legislation in India: Structure and Salient Features
Press and Registration Act
Delivery of Books (Public Libraries) Act
UNIT – IV: Information and Communication
Information: Characteristics, Nature, Value and Use of Information
Conceptual difference between Data, Information and Knowledge
Communication channels, models and barriers
National Knowledge Commission and Information Policy
Information Intermediaries
UNIT – V: Library and Information Profession
Professional Skills and Competencies
Professional Ethics11

Role of Library and Information Professionals in Digital Era

LIBRARY CLASSIFICATION (Theory)
UNIT - I: Elements of Library Classification
Concepts, Terminology
Need, Purpose and Functions
Species of Classification Schemes
UNIT - II: Theory and Development
Historical Development
General Theory: Normative Principles
Modes of Formation of Subjects
UNIT – III: Approaches to Library Classification
Postulational Approach and Systems Approach
Fundamental Categories, Facet Analysis and Facet Sequence
Phase Relation and Common Isolates
Devices in Library Classification
UNIT – IV: Notation and Construction of Classification Number
Notation: Need, Purpose, Types and Qualities
Call Number: Class Number, Book Number and Collection Number
Construction of Class Numbers
UNIT – V: General and Special Classification Schemes
Dewey Decimal Classification
Universal Decimal Classification
Colon Classification
Current Trends in Library Classification
LIBRARY CLASSIFICATION (Practical)
UNIT – I: Colon Classification (Ed. 6)
Introduction, Structure and Organisation
Steps in Classification
Classification of Documents with Basic Subjects
Classification of Documents with Compound Subjects
UNIT – II: Dewey Decimal Classification (Latest Edition)
Introduction, Structure and Organisation
Steps in Classification
Classification of Documents using Table 1 and 2
Use of Relative Index
UNIT – III: Colon Classification (Ed. 6)
Use of Common Isolates, Phase Relations and Devices
Classification of Documents with Compound and Complex Subjects

UNIT – IV: Dewey Decimal Classification (Latest Edition)
Classification of Documents

BASICS OF INFORMATION TECHNOLOGY INLIS (Theory)
UNIT – I: Introduction to Computers
Computers: Generations, Types, Input and Output Devices, Computer Architecture
Data Representation and Storage
Introduction to System Software and Application Software
Operating Systems: DOS, Window XP, Vista, Windows NT, Linux, etc.
Word Processing, Spreadsheets, PowerPoint Presentation
Graphics Software: Basic Functions and Potential Uses
Communication Software
UNIT – II: Library Automation
Library Automation: Planning and Implementation
In-house Operations: Acquisition, Cataloguing, Circulation, Serial Control, OPAC, etc.
Bibliographic Standards: CCF and MARC 21
Introduction to Metadata: Types of Metadata Dublin Core
Library Software Packages: Overview and House Keeping Operations
Case Studies: WINISIS, Alice for Windows and SOUL
UNIT – III: Database Management Systems
Database: Concepts and Components
Database Structures, File Organization and Physical Design
Database Management System: Basic Functions, Potential Uses
UNIT – IV: Web Interface to WINISIS Databases
Introduction to Web Interface: WWWISIS
Introduction to Web Servers: Apache Server and Internet Information Server
Web Interface Software: GENISIS
UNIT – V: Introduction to Internet
Basics of Internet
Search Engines and Meta Search Engines
Internet Search Techniques
E-resources and Online Databases

BASICS OF INFORMATION TECHNOLOGY INLIS (Practical)
UNIT – I: Operating Systems and Application Software
Installation and Functions of Different Operating Systems: Window XP, Vista, Windows NT, Linux
Setting of Desktop, Library Server and its Maintenance
Creating Presentations with PowerPoint
Editing and Formatting Word Documents
UNIT – II: Database Creation and Library Software
Installation and Creation of Databases: Import, Export, Hyperlinks and Printing of Records using WINISIS
Alice for Windows: Installation, Configuration and Functions
Installation, Configuration and Application of SOUL
UNIT – III: Database Web Interface
GENISIS: Installation, Configuration and Functions
Web Interface to WINISIS using GENISIS23 24
UNIT – IV: Online and Offline Searching
Web Searching
Advanced Internet Searching
Search through Meta Search Engines
Offline Databases
Internet and E-mail

MANAGEMENT OF LIBRARY ANDINFORMATION CENTRES
UNIT – I: Principles of Library Management
Management Vs Administration
General Principles and their Application
Library Organisation Structure and Library Governance
Library Planning: Need, Objectives and Procedures
Basics of Total Quality Management
UNIT – II: Financial and Human Resource Management
Library Finance and Sources of Finance
Library Budget, Budgeting and Accounting
Human Resource Management: Selection, Recruitment, Training, Development, Performance Appraisal
UNIT – III: Library Building and Resources Management
Library Building
Collection Development
Acquisition of Periodicals and Serials
Technical Processing of Documents
UNIT – IV: Services and Maintenance of the Library
Circulation Work
Maintenance Shelving and Stock Verification
Preservation
Library Services
Reference and Information Service
UNIT – V: Library Records and Statistics
Staff Manual
Library Statistics
Annual Report

INFORMATION SOURCES AND SERVICES
UNIT- I: Fundamental Concepts
Meaning, Definition, Importance, Nature and Characteristics
Printed and Electronic Information Sources
Types of Information Sources and Services
Criteria for Evaluation of Reference Sources
UNIT- II: Sources of Information
Primary Information Sources: General introduction (Periodicals, Conferences, Patents, Standards, Thesis/ Dissertations, Trade Literature etc.)
Secondary Information Sources: Dictionaries, Encyclopaedias, Biographical, Geographical, Bibliographies, Indexing and Abstracting, Newspaper Indexes and Digests, Statistics, Handbooks and Manuals
Tertiary Information Sources: Directories, Year books, Almanacs, Bibliography of Bibliographies, Union Catalogues.
UNIT- III: Reference and Information Services
Users and their Information Needs
Theory and Functions of Reference and Information Service
Enquiry Techniques
Role of Reference Librarian and Information Officer in Electronic Environment
UNIT- IV: Types of Information Services
Documentation Services: Abstracting and Indexing Services
Alerting Services, CAS, SDI, Reprographic Service, Translation Service,
Document Delivery and Referral Service

LIBRARY CATALOGUING (Theory)
UNIT – I: Fundamental Concepts and Historical Developments
Library Catalogue: Definition, Objectives, Purposes and Functions
History and Development of Library Catalogue Codes
Physical Forms of Catalogues
Types of Catalogues
UNIT – II: Types of Catalogue Entries
Kinds of Entries
Data Elements in Different Types of Entries
Filing of Entries in Classified and Alphabetical Catalogues
UNIT – III: Choice and Rendering of Headings
Personal Authors: Western and Indic Names
Corporate Authors
Pseudonymous, Anonymous Works and Uniform Titles
Non-Print Resources
UNIT – IV: Subject Cataloguing
Subject Cataloguing: Concept, Purpose and Problems
Chain Indexing
Subject Headings Lists: LCSH, SLSH

UNIT –V: Trends in Library Cataloguing
Centralized and Cooperative Cataloguing
Bibliographic Standards: ISBD, MARC, CCF, etc.
ISBN and ISSN

LIBRARY CATALOGUING (Practical)
Cataloguing of books using Classified Catalogue Code, 5th edition (with amendments) and AACR - II along with Sears List of Subject Headings (Latest edition)
UNIT - I: Classified Catalogue Code
Works of Single and Shared Authorship
Works of Mixed Responsibilities
Editorial Publications
Series Publications
Multi- volumed Works & Pseudonymous
UNIT- II: Anglo American Cataloguing Rules (Latest Edition)
Works of Single and Shared Authorship
Works of Shared Responsibilities
Editorial Publications
Multivolume and Pseudonymous
UNIT - III: Classified Catalogue Code
Works of Corporate Authorship
Works of Conflict of Authorship
Periodical Publications
Ordinary and Artificial Composite Books
UNIT- IV: Anglo American Cataloguing Rules (Latest Edition)
Works of Corporate Bodies
Serial Publications

MASTER OF LIBRARY AND INFORMATION SCIENCE

INFORMATION SYSTEMS ANDPROGRAMMES*
UNIT – I: Information Systems and Organisations

Information Organisation as a System: Basic Concepts, Types and Characteristics of an Information System

Kinds of Information System: Libraries, Documentation Centres and Information Centres

Data Centres, Information Analysis Centres, Referral Centres and Clearing Houses

Archives and Translation Pools: Functions and Services

UNIT – II: National Information System and Policy

Planning and Design of National Information System

National Information Policy National Information Systems: NISCAIR, DESIDOC, NASSDOC, SENDOC, NDCMC, ENVIS, etc.

UNIT – III: Global Information Systems

Programmes and Activities of UNESCO, UNISIST & IFLA, INIS, AGRIS, INSPEC & MEDLARS, etc.

UNIT – IV: Resource Sharing, Library Networks and Library Consortia

Programmes and Activities of INFLIBNET and DELNET

CSIR E-Journals Consortium, UGC-INFONET Digital Library Consortium

UNIT – V: Information Services and Information Products

Information Services

Literature Search

Documentation Services, Translation Services

CAS, SDI, Document Delivery Service, Alert Services and INTERNET Services

Information Products: Newsletter, In-house Journal, State of the Art Report, Trend Report, etc.

ADVANCED KNOWLEDGEORGANISATION: CLASSIFICATION (Practical)

UNIT- I: Fundamentals of UDC

Introduction to *Universal Decimal Classification* (Latest Edition): Structure, Principles and Organisation

Classification of Simple and Compound Subject Documents

UNIT- II: Advance Applications of UDC

Introduction to Common Auxiliaries and Special Auxiliaries

Application of Common Auxiliaries, Special Auxiliaries, Devices, etc.

Classification of Complex Subject Documents

ADVANCED KNOWLEDGE ORGANISATION:CATALOGUING (Practical)

Cataloguing of Non Book Material and Electronic Resources According to AACR (Latest Edition)

UNIT–I: Non-Book Materials

Complexities of Periodicals

Manuscripts

Cartographic Materials

Microforms Graphic Materials

UNIT–II: Electronic Resources

Sound Recordings29

Motion Pictures
Video Recordings
Computer Files
Web Resources

INFORMATION AND COMMUNICATIONTECHNOLOGY APPLICATIONS IN LIS (Theory)
UNIT–I: Web Technologies in Libraries
Implication of WWW on Library Websites, Web OPACs
Web 2.0 and Web 3.0: Features and Functions
Web Directories, Subject Gateways, Library Portals, etc.
Weblogs (blogs), Podcasts, RSS Feeds, Instant Messaging, Wikis, Flickr, etc.
UNIT-II: Integrated Library Automation and Networking Software
Open Source Library Software and Applications
Web based Library Management Software
Library Software Securities Parameters
Virtual Library
UNIT–III: Multimedia and Institutional Repositories
Multimedia Applications in Libraries
Image Creation using Photoshop and Corel Draw etc.
Institutional Repositories: Greenstone Digital Library, D space, and E-prints etc.
UNIT–IV: Introduction of Networks
Types of Networks: Network Components, Categories, LAN Standards and Inter-Network
Wireless Networking and Emerging Networking Technologies
Data Networks: Integrated Services Digital Network (ISDN), Digital Subscribers Line (DSL), Asynchronous Transfer Mode (ATM), etc. Network Software: Network Operating Systems, Domain Name System and Network Management Systems, etc.
OSI Network Model and TCP/IP Reference Model
UNIT–V: Emerging Technologies in Libraries
RSS Feeds Technology and Libraries
Library Security Technology: RFID, Barcode, Smart Card and CCTV, etc.
Video Conferencing and Audio Conferencing
Functional Requirements for Bibliographic Records (FRBR)
Digital Content Management System30

Federated Search and Multimedia Databases Search
Protocols: Z39.50 Standard for Retrieval and OAI-PMH
Artificial Intelligence and Libraries
Expert Systems in Libraries

RESEARCH METHODOLOGY
UNIT–I: Introduction to Research
Research: Concept, Need and Purpose
Research Problem and Research Design
Literature Review
Hypothesis: Definition, Types, Sources and Functions
UNIT–II: Types of Research Methods
Historical, Survey and Experimental
Case Study
Scientific Research and Statistical Research etc.
UNIT–III: Research Techniques
Research Techniques and Tools: Questionnaire, Interview, Observation, Schedule and Check-list, etc.
Library Records and Reports
UNIT–IV: Statistics and its Applications
Descriptive Statistics – Measures of Central Tendency: & Dispersion, Correlations and linear regression, Chi-Square test, t-test, z-test, f-test.51 52
Presentation of Data: Tabular, Graphic, Bar Diagram and Pie Chart, etc.
Report Writing
Statistical Packages – MS-Excel, SPSS, and Web-based Statistical Analysis Tools, etc.

MARKETING OF LIBRARY ANDINFORMATION PRODUCTS AND SERVICES
UNIT–I: Fundamental Concepts
Needs, Objectives and Philosophy
Marketing Environment: Producer, Consumer – Buyer Behaviour
Marketing Information System
Market Segmentation Marketing Mix
UNIT–II: Strategies and Techniques
Strategic Planning
Marketing Research
Marketing Process
UNIT–III: Promotion of LIS Products and Services
LIS Products and Services as a Marketable Commodity
Pricing, Distribution Channels and Communication Strategies
Advertising, Sales Promotion
Public Relations
Electronic Marketing
UNIT–IV: Management Consultancy
Evolution, Need and Objectives
Voluntary versus Authenticated Consultancy
Impact of Management Consultancy on Librarianship

UNIT–V: Information Analysis, Consolidation and Re-Packaging
Information Analysis and Consolidation: Concept, Need and Purpose
Packaging and Re-Packaging: Concept, Need, Purpose and Criteria
Information Consolidation Products: Concept, Types, Design and Development

APPLICATIONS IN LIS (Practical)
UNIT–I: Website Designing and Navigational Tools
Designing Static and Dynamic Library Websites
Designing Mobile Websites

Developing Web Directories, Subject Gateway and Library Portals

Designing and Developing Library Blogs, RSS Feeds, Wikis and Flickr etc.

Image Creation using Photoshop, Corel Draw etc.

UNIT–II: Integrated Library Management Systems and Institutional Repositories

Installation and Configuration, Hands on Functional Modules of an Integrated Library Management System (Open Source)

Web based Library Management Software

Installation and Configuration, Hands on Collection Building using GLI in Local and Web Library Modes and Metadata Creation

Customization of Green stone Digital Library Software

UNIT–III: Audio and Video Conferencing

Audio Conferencing

Video Conferencing

UNIT–IV: Advanced Searching and Metadata Creation

Downloading MARC 21 Records using Z39.50 Protocol

Federated Search

Creation of Metadata

INFORMATION STORAGE AND RETRIEVALSYSTEM

UNIT–I: Fundamental Concepts

Concept, Characteristics, Objectives, Types, Operations and Design

Compatibility of ISAR System

Information Retrieval Process and Search Strategy

Evaluation of ISAR System

Vocabulary Control Tools: Classification Schedules, Subject Heading Lists and Thesaurus

Need, Structure and Construction of Thesaurus

Principles and Evolution of Bibliographic Description

UNIT–II: Knowledge Management

Introduction to Indexing Systems

Introduction to Indexing in Corporate System

Introduction to Indexing in Research System

UNIT–III: Bibliographic Description

Rules for Bibliographic Description

Standards for Bibliographic Record Formats

Metadata Concept

Metadata Standards: Dublin Core, MARC 21, etc.

UNIT–IV: Search Techniques and Information Retrieval

Man and Machine Retrieval System

INFORMATION LITERACY APPLICATIONSINLIS

UNIT–I: Fundamental of Information Literacy

Concept, Need and Objectives

Areas of Information Literacy

Standards and Models in Information Literacy

Role of Institution in Information Literacy

UNIT-II: Information Literacy Programmes

Scope of Information Literacy Programme

National Programmes in Information Literacy

International Programmes in Information Literacy

UNIT–III: Methodology of Information Literacy

Information Literacy Products: Library Brochure, Database Brochure, Web based Access Instructions, Information Bulletin

Designing of Information Literacy Programme
Implementation of Information Literacy Programmes
UNIT-IV: Application of Information Literacy in Library and Information Centres
Information Literacy for Users
Information Literacy for Professionals
Information Literacy for Research and Development
UNIT-V: Trends in Information Literacy

Web based Information Literacy System
OPAC Information Literacy System
Life Long Learning System

PUBLIC LIBRARY AND INFORMATIONSYSTEM
UNIT–I: Public Libraries and their Development
Objectives and Functions
History and Development of Libraries with Special Reference to India
Role of Public Libraries in Society
Agencies and their Role in Promotion and Development of Public Libraries in India
UNIT–II: Collection Development and Management
Periodicals, Conference Literature, Grey Literature and Government Publications
Non-Book Materials
Electronic Sources and Online Databases
UNIT–III: Library Organization and Administration
Organizational Structure

Staff Manual, Library Surveys, Statistics and Standards, etc.
UNIT–IV: Information Services
CAS, SDI, Abstracting and Indexing Services
Library Bulletin, Newspaper Clipping Services
Computerized Services
Resource Sharing and Networking
UNIT–V: Financial and Human Resource Management
Determination of Finance, Sources of Finance
Types of Budget
Nature, Size, Selection, Recruitment, Qualification and Training
Responsibilities and Duties
Competency Development

ACADEMIC LIBRARY AND INFORMATIONSYSTEM
UNIT–I: Academic Libraries and their Development
Objectives and Functions
History and Development of Libraries with Special Reference to India
Role of Libraries in Formal and Non-Formal Education System
UGC and its Role in the Development of College and University Libraries
UNIT–II: Collection Development and Management
Periodicals, Conference Literature, Grey Literature and Government Publications
Non-Book Materials
Electronic Resources and Online Databases61 62

UNIT–III: Library Organization and Administration
Organizational Structure
Staff Manual, Library Surveys, Statistics and Standards etc.
UNIT–IV: Information Services
CAS, SDI, Abstracting and Indexing Services
Library Bulletin, Newspaper Clipping Services

Computerized Services
Resource Sharing and Networking: INFLIBNET, UGC-INFONET Digital Library Consortium, etc.
Information Literacy Programmes
UNIT–V: Financial and Human Resource Management
Determination of Finance, Sources of Finance
Types of Budget
Nature, Size, Selection, Recruitment, Qualification and Training
Responsibilities and Duties
Competency Development

RESEARCH & TECHNICAL LIBRARY& INFORMATION SYSTEM
UNIT-I: Research and Technical Libraries and their Development
Objectives and Functions
History and Development of Libraries with Special Reference to India
Role of Special Libraries and its Relationship with Parent Organization
Types and Functions of Special Libraries
Agencies and their Role in the Promotion and Development of Research and Technical Libraries
UNIT-II: Collection Development and Management
Periodicals, Conference Literature, Grey Literature, Patents, Standards, Specifications and
Government Publications

UNIT-IV: Planning and Organization of Various Information Services
CAS, SDI, Abstracting and Indexing Services
Library Bulletin, Newspaper Clipping Services
Computerized Services
Resource Sharing and Networks: RLIN, OCLC etc.
UNIT - V: Financial and Human Resource Management
Determination of Finance, Sources of Finance
Types of Budget
Nature, Size, Selection, Recruitment, Qualification and Training
Responsibilities and Duties
Competency Development

HEALTH SCIENCE LIBRARY ANDINFORMATION SYSTEM
UNIT–I: Health Science Libraries and their Development
Objectives and Functions
History and Development of Libraries with Special Reference to India
Role of Medical Libraries
Information Policies in Health and Family Welfare
Agencies and their Role in the Promotion and Development of Medical Libraries in India

UNIT–II: Collection Development and Management
Periodicals, Conference Literature, Grey Literature, Patents, Standards, Specifications and
Government Publications
Non-Book Materials
Electronic Resources and Online Databases
UNIT–III: Library Organization and Administration
Organizational Structure
Staff Manual, Library Surveys, Statistics and Standards etc.
UNIT–IV: Information Services
CAS, SDI, Abstracting and Indexing Services
Library Bulletin, Newspaper Clipping Services
Computerized Services
Resource Sharing and Networking
Information Literacy Programmes

UNIT–V: Financial and Human Resource Management
Determination of Finance, Sources of Finance
Types of Budget
Nature, Size, Selection, Recruitment, Qualification and Training
Responsibilities and Duties
Competency Development

AGRICULTURAL SCIENCES LIBRARY& INFORMATION SYSTEM
UNIT–I: Agricultural Science Libraries and their Development
Objectives and Functions
History and Development of Libraries with Special Reference to India
Role of ICAR, Committees and Other Agencies in the Development of
Agricultural Libraries in India
UNIT–II: Collection Development and Management
Periodicals, Conference Literature, Grey Literature, Patents, Standards, Specifications and
Government Publications etc.
Non-Book Materials
Electronic Resources and Online Databases
UNIT–III: Library Organization and Administration
Organizational Structure

UNIT–IV: Information Services
CAS, SDI, Abstracting and Indexing Services
Library Bulletin, Newspaper Clipping Services
Computerized Services
Resource Sharing and Networking: AGRIS, INAGRIS, CABI, etc.
Information Literacy Programmes
UNIT–V: Financial and Human Resource Management
Determination of Finance, Sources of Finance
Types of Budget
Nature, Size, Selection, Recruitment, Qualification and Training
Responsibilities and Duties
Competency Development

ENGINEERING &TECHNOLOGICALLIBRARY & INFORMATION SYSTEM
UNIT–I: Engineering and Technological Libraries and their Development
Objectives and Functions
History and Development of Libraries with Special Reference to India
Role of Engineering and Technological Libraries
Role of Agencies in the Growth and Development of Engineering and Technological Libraries in
India
UNIT–II: Collection Development and Management
Periodicals, Conference Literature, Grey Literature, Patents, Standards,
Specifications and Government Publications67 68
Non-Book Materials
Electronic Resources and Online Databases
UNIT–III: Library Organization and Administration

Organizational Structure
Staff Manual, Library Surveys, Statistics and Standards etc.
UNIT–IV: Information Services
CAS, SDI, Abstracting and Indexing Services
Library Bulletin, Newspaper Clipping Services
Computerized Services
Resource Sharing and Networking: INDEST – AICTE Consortium

Information Literacy Programmes
UNIT–V: Financial and Human Resource Management
Determination of Finance, Sources of Finance
Types of Budget
Nature, Size, Selection, Recruitment, Qualification and Training
Responsibilities and Duties
Competency Developmen

PRINT, ELECTRONIC SOURCES &LITERATURE IN HUMANITIES
UNIT–I: Historical Development
Scope of the Discipline and its Development
Research Trends in Humanities: Religion, Philosophy, Fine Arts and Literature
UNIT–II: User Studies and Information Seeking Behaviour
Information Needs of Users
Information Seeking Behaviour
User Studies: Importance, Objectives and Types
Planning User Survey
Methods of User Service
UNIT–III: Information Sources and Evaluation
Primary, Secondary and Tertiary Sources
Evaluation of Secondary Sources: Print and Electronic Resources
UNIT–IV: Databases and Internet Services
Networked and Distributed Databases
Consortia and Subject Gateways
Internet Resources and Services

UNIT–V: Role of Contributors and Institutions
Activities of Research Institutions and Professional Organisations in the Growth and Development of Humanities with Particular Reference to India, UK and USA
Contributions made by the Prominent Thinkers in the field of Religion, Philosophy, Fine Arts and Literature

PRINT, ELECTRONIC SOURCES& LITERATURE IN NATURAL SCIENCES
UNIT–I: Historical Development
Scope of the Discipline and its Development
Research Trends in Natural Sciences: Physical and Biological Sciences
UNIT–II: User Studies and Information Seeking Behaviour
Information Needs of Users
Information Seeking Behaviour
User Studies: Importance, Objectives and Types
Planning User Survey
Methods of User Service
UNIT–III: Information Sources and Evaluation
Primary, Secondary and Tertiary Sources
Evaluation of Secondary Sources: Print and Electronic Resources
UNIT–IV: Databases and Internet Services
Networked and Distributed Databases
Consortia and Subject Gateways
Internet Resources and Services
UNIT–V: Role of Contributors and Institutions
Activities of Research Institutions and Professional Organisations in the Growth and Development of Natural Sciences with Particular Reference to India, UK and USA
Contributions made by the Prominent Natural Scientists in the field of Physical and Biological Sciences

PRINT, ELECTRONIC SOURCES& LITERATURE IN SOCIAL SCIENCES
UNIT–I: Historical Development
Scope of the Discipline and its Development
Research Trends in Social Sciences: History, Political Science, Economics and Sociology
UNIT–II: User Studies and Information Seeking Behaviour
Information Needs of Users
Information Seeking Behaviour
User Studies: Importance, Objectives and Types
Planning User Survey
Methods of User Service
UNIT–III: Information Sources and Evaluation
Primary, Secondary and Tertiary Sources
Evaluation of Secondary Sources: Print and Electronic Resources
UNIT–IV: Databases and Internet Services
Networked and Distributed Databases
Consortia and Subject Gateways
Internet Resources and Services
UNIT–V: Role of Contributors and Institutions
Activities of Research Institutions and Professional Organisations in the Growth and Development of Social Sciences with Particular Reference to India, UK and USA
Contributions made by the Prominent Social Scientists in the field of History, Political Science, Economics and Sociology

MASTER OF PHILOSOPHY (M.Phil.)

COURSE-I: RESEARCH METHODS
Nature and role of research in library and information science.
Design of a scientific research study. Research methods and their application to library and information science
Collection and analysis of data: Statistical methods. Survey method
Experimental method. Analysis and interpretation of data. Writing of report including presentation of data
Case study of research methodology used in survey reports and other Studies of libraries/documentation centres/information centres, etc.47

COURSE-II: LIBRARY PLANNING AND MANAGEMENT

Planning methodology

Comparative analysis of recent managerial philosophies and practice with a special reference to attitudes, motivation, problem solving, decision making, organization theory, human relations, personnel management, etc.

Organization structures; Library system

Government of the library

Personnel management; Human relations in management, staffing, staff Development

Applications of system study techniques to library organizations and library Situations

Evaluation of library procedures and services. Time and motion studies Performance testing

Cost benefit analysis

Financial management

COURSE-III (a): UNIVERSITY AND COLLEGE LIBRARY SYSTEM

Changing perspective in higher education and their implication for development of libraries

Types of Universities (including Open University) and their impact on library Services

Current state of university and college libraries in selected developed and developing countries.

Library government: Constitution and powers

Changing patterns in library organizations: Library system structure and provision of services

Library Personnel

Library Finance : Cost benefit studies and analysis

Library collections : Use and evaluation

University and college : Their relationship with other library networks at

national and international levels

Library services : Their evaluation and effectiveness

Use of computers and other mechanical devices

Planning for future development Plans

COURSE-III (b): RESEARCH AND TECHNICAL LIBRARYSYSTEM

Changing perspectives in R & D and their implication for the development of libraries

Current state of research and technical libraries in selected developed and developing countries.

NISSAT48

Library government : Constitution and power
Changing patterns in library organization : Library systems, Structure and provision of service
Library Personnel :
Library Finance : Cost benefit studies and analysis
Library Collection : Use and Evaluation
Research and technical library networks : Their relationship with other library networks at national and international levels
Library service : Their evaluation and effectiveness
Use of computers and other mechanical devices
Planning for future development : Preparation of development plans, case studies of selected research and technical libraries

COURSE-III (c): PUBLIC LIBRARY SYSTEM

Changing perspective in education and society and their implications for the development of Public Libraries
Current state of public libraries in selected development and developing countries
Library government : Constitution and power
Changing patterns in library organization : Library systems, Structure and provision of service
Library Personnel :
Library Finance : Cost benefit studies and analysis
Library Collection : Use and Evaluation
Research and technical library networks : Their relationship with other library networks at national and international levels
Library service : Their evaluation and effectiveness
Use of computers and other mechanical devices
Planning for future development : Preparation of development plans,

COURSE-III (d): INFORMATION PROCESSING ANDORGANIZATION

Classification : Recent development and trends for the future
Subject indexing : Critical study of the different lists of subject headings
The saurus and the sauro facets methodology for developing the saurus
Pre-coordinate and post-coordinate systems of subject indexing: PRECIS, POPSI.
Standards for bibliographical description : National and international Evaluation of information systems

COURSE III (e): INFORMATION TRANSFER ANDDISSEMINATION

Role of information in planning, decision making, management etc.
Information communication media and methods
Trends in communication of information
Barriers to communication

Information marketing
Information gathering habits of the users
Information services CAS, SDI, abstracting services, digests, technical notes, state-of the art and trend reports, etc. and their evaluation
Search strategy
Document delivery systems; translation; reprography

COURSE-III (f): COMPARATIVE LIBRARIANSHIP

Definition and scope of comparative librarianship. Librarianship in ancient, medieval and modern times.
Comparative study of library development of different library systems Merits and demerits of library systems
Issues in modern librarianship

COURSE III (g): EDUCATION FOR LIBRARY ANDINFORMATION SCIENCE

Sociology of library and information science education
Trends in library and information science education: National and International levels
Level of courses in education for librarianship and their objectives
Curriculum design: Methodology

Teaching techniques and evaluation of student performance
Faculty development
Development of research programme in library and information science
Manpower planning and its impact on library and information education programme.

DOCTOR OF PHILOSOPHY (Ph.D.)