APPENDIX – A

2-Year Integrated Course of
Master of Library & Information Science (M.Lib.I.Sc.)

Course Structure

(1) The integrated M.Lib.I.Sc. Course will be of 2 years duration consisting of 4 Semesters with total of 80 credits. Each paper is of 5 Credits except the courses offered through *Swayam* portal.

(2) The semester wise details of the paper would be as follows:

Papers	Marks allocation		
	Internal Assessment	Semester Exam	Total Marks
Semester-I			
Paper I: Foundations of Library & Information Science	30 marks	70 marks	100
Paper II: Computer Basics & Applications	30 marks	70 marks	100
Paper III: Knowledge Organisation –Library Classification & Cataloguing (Theory)	30 marks	70 marks	100
Paper IV: Knowledge Organisation –Library Classification & Cataloguing-I (Practical)	30 marks	70 marks	100
Semester-II			
Paper V: Library Management	30 marks	70 marks	100
Paper VI: Computer Applications (Practical)	30 marks	70 marks	100
Paper VII: Information Sources & Services	30 marks	70 marks	100
Paper VIII: Knowledge Organisation –Library Classification & Cataloguing-II (Practical)	30 marks	70 marks	100
Semester-III			
Paper IX : Universe of Knowledge & Research Methods	30 marks	70 marks	100
Paper X : Information Retrieval (Theory)	30 marks	70 marks	100
Paper XI : Information Retrieval (Practical)	30 marks	70 marks	100
Paper XII : Information Technology and System Design	30 marks	70 marks	100
Semester-IV			
Paper XIII: Information Science and Knowledge Management	30 marks	70 marks	100
Paper XIV: Elective			
XIV (a) Information Sources & Products in Science & Technology	30 marks	70 marks	100
XIV (b) Information Sources & Products in Social Sciences	30 marks	70 marks	100
XIV (c-1) Bibliometrics and Scientometrics[Ψ]	3 Credits		
XIV (c-2) Yoga[Ψ]	2 Credits	5 Credits	
Paper XV: Information Users & Needs	30 marks	70 marks	100
Paper XVI: Information Technology Applications (Practical)	30 marks	70 marks	100

[Ψ] Course offered through *Swayam* Portal.

Detailed content of papers are as follows:

SEMESTER-I
Paper I: Foundations of Library & Information Science

Unit 1: Library and Librarianship

  (i)   Libraries, Documentation and Knowledge Resource Centres
  (ii)   Librarianship: Profession, Ethics and Challenges
  (iii)   Types and Function of Libraries Five Laws of Library Science & their Implications
  (iv)   Library Building, Furniture and Equipment

Unit 2: History & Development of Libraries, Documentation & Knowledge Resource Centres

  (i)   Development of Libraries & Knowledge Resource Centres
  (ii)   Library Legislation: Need, Function, Salient feature of State Library Acts in India
  (iii)   Model Public Library Act
  (iv)   Information System & Services: Concept and propositions

Unit 3: Library Associations & Organisations for Promotion of Libraries

  (i)   Professional Organisations: Objectives, Functions & Professional Activities
  (ii) National & Regional Associations: ILA, IASLIC, and UPLA
  (iii) International Associations: IFLA, American Library Association and CILIP
  (iv) NAPLIS, National Knowledge Commission, National Mission on Libraries

Unit 4: Library Outreach Activities

  (i)   Library Resource Sharing
  (ii) Public Relation & Extension activities
  (iii) Library Consortia: FORSA, ICOLC, SPARC & E-Shodhsindhu

Unit 5: Intellectual Property Rights

  (i)   IPR: Concept, Need & Types
  (ii)   Press and Registration of Books Act
  (iii)   Delivery of Books Act
  (iv)   Indian Copyright System and WIPO

Paper II: Computer Basics and Applications

Unit 1: Computer Basics

(i)   Computer: Definition, Developments and Computer Generations
(ii)   Classification of Computers
(iii)   Basic Components of a Computer, Computer Peripherals

Unit 2: Hardware and Software Components

(i)   Computer Hardware: Components, Functions
(ii)   Processors, Memory, Storage and Input/output Peripherals
(iii)   Computer Software: Types & Functions
(iv)   Operating Systems: Types and Functions with reference to Windows and Linux

Unit 3: Software Packages

(i)   Word Processing Packages
(ii)   Desktop Publishing
(iii)   Library Application Software: CDS/ISIS

Unit 4: Library Automation

(i)   Library Automation Software: an Overview
(ii)   Use of Computers in the house keeping operation
(iii)   Retrospective Conversion
(iv)   Library Software Packages: Features, Selection, Market Value
(v)   Study of available Library Automation Suites

Unit 5: Networking

(i)   Definition, Need, Client Server Architecture
(ii)   Network Types & Topologies
(iii)   Components of Networks

Note: Internal Assessment will be reserved for Hands on experience on computer
        Operations with reference to
        (i)   Linux
        (ii)   Office Management Suite

Paper III: Knowledge Organisation: Library Classification & Cataloguing (Theory)

Unit 1: Basics of Classification
- (i) Definition, Need and Purpose of Classification
- (ii) Concept of Call Number, Class Number & Book number
- (iii) Species of Classification Schemes
- (iv) Salient Features of DDC, CC and UDC
- (v) Notation: Definition, Kinds and Function

Unit 2: Theoretical Foundations of Classification

- (i) Canons of Classification
- (ii) Phase Relations, Common Isolates & Other Auxiliary Tables of DDC, CC and UDC
- (iii) Postulational Approach to Classification, Five Fundamental Categories and Facet Sequence
- (iv) Principles of Helpful Sequence
- (v) Devices and Indicator Digits
- (vi) Recent Developments in Classification

Unit 3: Basics of Cataloguing

- (i) Library Catalogue: Definition, Function, Types & Physical Forms
- (ii) Kinds of Catalogue Entries and their Functions
- (iii) History of Catalogue Codes
- (iv) Salient Features of AACR-II and CCC

Unit 4: Normative Principles and Subject Cataloguing

- (i) Normative Principles & Canons of Cataloguing
- (ii) Subject Cataloguing: Chain Procedure, Subject Heading Lists.
- (iii) Filing of Catalogue Entries & Alphabetization

Unit 5: Bibliographical Formats & Other Aspects

- (i) Machine Readable Catalogue, OPAC & Web OPAC
- (ii) Standards of Bibliographic Descriptions and Record Formats : ISBD, MARC21,ISO – 2709/Z39.2, FRBR, FRSAD, FRAD, RDA, Dublin Core
- (iii) Centralised and Cooperative Cataloguing, Simplified Cataloguing, Programmes for Cooperative Cataloguing: BIBCO, CONSER & NACO
- (iv) Cataloguing of Non-Book Materials: Cartographic Materials, Electronic Documents, Audio-visual Materials and Continuing Resources

Paper IV: Knowledge Organization: Library Classification & Cataloguing- I (Practical)

  (i) Steps in Classification, Classification of Documents by Colon Classification and Dewey Decimal Classification 22nd edition with the following details –
Colon Classification: Basic Subject, Compound and Complex Subject, Five Fundamental Categories, Facet Sequence, Phase Relations.
Dewey Decimal Classification: Main Class, Divisions, Tables, Use of Schedule & Relative Index.

  (ii) Cataloguing of Books and Periodicals in accordance with the latest available edition of AACR and Sears List of Subject Headings: Works of Single, Shared and Mixed Responsibilities (personal, corporate etc.)

  (iii) MARC21 Format for Bibliographic Description

Note: 20 marks will be reserved for viva-voce in Semester Exam.

SEMESTER–II

Paper V: Library Management

Unit 1: Principles of Library Management

  (i)   Principles of Management & their application in Libraries and Information Centres
  (ii)   Elements of Management Process: POSDCORB
  (iii) Total Quality Management (TQM)

Unit 2: Collection Development

  (i)   Policies & Principles: Print and Digital Resources
  (ii)   Selection-tools for Books and Non-book Materials
  (iii) Handling of Government Documents and Manuscripts

Unit 3: Library House Keeping Activities: Routines & Workflows

  (i)   Acquisition & Processing of Reading Materials – Principles, Routines and Records
  (ii)   Technical Processing: Routines and Tools
  (iii) Circulation: Methods, Routine, Records and Serials Control
  (iv)   Shelving, Maintenance, Stock Verification and Preservation of Library Materials
  (v)   Annual Report and Statistics

Unit 4: Personnel Management

  (i)   Human Resource Development
  (ii)   Staff Recruitment, Selection & Training, Staff Formula
  (iii) Staff Development, Motivation & Leadership Quality Improvement
  (iv)   Staff Manual

Unit 5: Financial Management

  (i)   Sources of Library Finance
  (ii)   Budget Estimation
  (iii) Budgeting Techniques

Paper VI: Computer Applications (Practical)

Hands-on experience with computer operation with reference to
(i)   Web Page Designing
        a. Syntax of HTML Document
        b. Formatting of HTML Document
(ii)   CDS/ISIS– Database creation, Management and Retrieval
(iii)   MARC Format

Note: 20 marks will be reserved for viva-voce in Semester Exam.

Paper VII: Information Sources & Services

Unit 1: Nature of Information Sources

    (i)   Concept of Information Source
    (ii)   Kinds of Information Source – Primary, Secondary and Tertiary
    (iii)   Basic Reference & Information Sources and Criteria for Evaluation

Unit 2: Reference Tools

    (i)   Bibliographical Sources: National Bibliographies, Trade Bibliographies
    (ii)   Language Dictionaries
    (iii)   Encyclopeadia
    (iv)   Yearbooks & Directories
    (v)   Biographical & Geographical Sources

Unit 3: Electronic Sources

    (i)   CD-ROMs and Multimedia
    (ii)   Electronic Books and Electronic Journals
    (iii)   Electronic Databases

Unit 4: Web Resources

    (i)   World Wide Web: Services & Facilities
    (ii)   Websites & Sources – Subject Portals, Digital Libraries, Discussion-Forums, Bulletin-Boards, Consortia, Wikis, Blogs & RSS

Unit 5: Information Services

    (i)   Information Services: Concept, Types and Need
    (ii)   Type of Information Services: Literature Search, Documentation Service, Translation Service and Document Delivery Service
    (iii)   CAS and SDI Service
    (iv)   Electronic Information Service

Paper VIII: Knowledge Organisation: Library Classification & Cataloguing – II (Practical)

    (i)   Classification of Documents with Complex Subjects according to DDC 22nd edition and Colon Classification

    (ii)   Cataloguing of Documents involving complicated Personal and Corporate Authorship, Periodicals according to AACR-II.

Note: 20 marks will be reserved for viva-voce in Semester Exam.

SEMESTER–III

Paper IX: Universe of Knowledge and Research Methods

Unit 1: Universe of Knowledge

- (i)   Definition, Source of Knowledge, Types of Knowledge
- (ii)   Characteristics of the Universe of Knowledge
- (iii)   Subjects having Knowledge as their field of Study
- (iv)   Modes of thinking: Authoritative, Speculative, Tenacious and Positivistic

Unit 2: Modes of Formation of Subjects

- (i)   Fission, Fusion, Distillation, Lamination, Loose Assemblage
- (ii)   Spiral of Scientific Method

Unit 3: Research Methods

- (i)   Research –Definition, Nature, Characteristics, Purpose and Kinds of Research
- (ii)   Scientific Methods: Features
- (iii)   Research Methods – Historical, Survey and Experimental
- (iv)   Formulation of Research Design: Exploratory, Descriptive, Diagnostic and Experimental
- (v)   Sampling Technique

Unit 4: Methods of Data Collection & Representation

- (i)   Collection of Data: Questionnaire, Interview and Case Study
- (ii)   Presentation of Data: Table, Diagram, Graphs etc.
- (iii)   Research Ethics and Plagiarism
- (iv)   Technical Writing & Writing Skills

Unit 5 : Statistical Methods & Metrics in Library and Information Science

- (i)   Statistical Measures: Measures of Central Tendency; Measure of Variability; Correlation; Chi-square Test
- (ii)   Bibliometrics, Scientometrics & Webometrics: Meaning, Scope Parameters
- (iii)   Bibliometric Laws & their Applications
- (iv)   Citation and Referencing Style

Paper X: Information Retrieval (Theory)

Unit 1: Subject Analysis and Representation

  (i)   Fundamentals of Retrieval Systems: Nature & Characteristics
  (ii)   Problems of Subject Analysis & Representation: Contribution of Cutter, Kaiser, Ranganathan, Farradane & Coates Subject
  (iii)   Thesaurus: Definition, Types, Function, Structure & Construction, Thesaurofacet

Unit 2 : Abstracting

  (i)   Abstracting : Definition, Types, Slant in Abstracting
  (ii)   Principles & Canons of Abstracting

Unit 3: Subject Indexing

  (i)   Subject Indexing : Concept & Development
  (ii)   Assigned Indexing:
          a.   Pre-coordinate Indexing System – Chain Indexing, PRECIS, POPSI
          b.   Post Coordinate Indexing System – Uniterm
  (iii)   Derived Indexing : KWIC, KWOC, Citation Indexing and Full text

Unit 4: Information Searching & Retrieval

  (i)   IR models: Cognitive, Probabilistic etc.
  (ii)   IR Performance Evaluation
  (iii)   Search Techniques: Boolean, Proximity, Truncation etc
  (iv)   Web-based Retrieval
  (v)   XML Retrieval

Unit 5: Modern IR Applications

  (i)   Artificial Intelligence & Man-Machine Interface
  (ii)   Natural Language Processing
  (iii)   Concept Maps & Ontology
  (iv)   Data Mining
  (v)   Semantic Web, Linked Data & Big Data

Paper XI: Information Retrieval (Practical)

(i)   Classification of documents with complex subjects according to UDC and Colon Classification

(ii)   Cataloguing of documents involving complicated personal & corporate authorship, complex periodicals & non-book material

(iii)   Indexing practice and Vocabulary Control Device practice

Note: 20 marks will be reserved for viva-voce in Semester Exam.

Paper XII: Information Technology and System Design

Unit 1: Information Technology: Basics

    (i)   Overview of Information Technology
    (ii)   Computer and Communication Technology
    (iii)   Application of Information Technology in Libraries
    (iv)   Digitization and Digital Divide
    (v)   Digital Preservation

Unit 2: Internet & WWW

    (i)   Internet: Overview and History
    (ii)   Uniform Resource Identifiers, Hyper Text, Hyper Link, and Hyper Media
    (iii)   Internet Protocol – HTTP, HTTPS, FTP, Remote Login, Z39.50, OAI-PMH
    (iv)   Browsers and E-mail
    (v)   Search Engine –Types and Evaluation
    (vi)   Interactive Web

Unit 3: Database Management System

    (i)   Database: Definition, Concept, Components and Types
    (ii)   Database Structure: Logical Data Structure, Physical Data Structure
    (iii)   Database Management System Models : Structure– Hierarchical, Networking, Relational and Object Oriented

Unit 4: System Analysis and Design

    (i)   System Analysis and Design: Concept and Types
    (ii)   System Design and Development
    (iii)   Implementation & Evaluation

Unit 5: Digital Library

    (i)   Digital Library: Conceptual Framework and Architecture
    (ii)   Digital Object Management
    (iii)   Digital Library : Procedure and Implementation
    (iv)   Digital Library Software

SEMESTER– IV

Paper XIII: Information Science and Knowledge Management

Unit 1: Information Science

    (i)   Data: Definition, Scope and Types
    (ii)   Information: Definition, Scope, Type, Nature and property
    (iii)   Conceptual difference between Data, Information and Knowledge
    (iv)   Representation of Information: Sign, Signal, and Symbol
    (v)   Information Science: Definition Scope and Objectives
    (vi)   Information Science as a Discipline and its Relationship with other Subject

Unit 2: Information Systems and Communication

    (i)   Communication Process, Channels, Models and Barriers
    (ii)   Information Generation: Modes and Forms
    (iii)   Information Communication: Theories & Models
    (iv)   Information System: MIS, DSS, and Expert System

Unit 3 : Library, Information and Society

    (i)   Information Society: Genesis, Characteristics and Implications
    (ii)   Changing role of Libraries and Information Centres in Society
    (iii)   Concepts of Freedom, Censorship, Fair Use, Creative Commons
    (iv)   Policies Relating to Information: Intellectual Property Rights, Right to Information Act, SHEPRA/RoMEO Project, COPE

Unit 4: Information Economics and Information Industry

    (i)   Information as an Economic Resource
    (ii)   Information Industry: Primary, Secondary etc.
    (iii)   LIS Products and Services as a Marketable Commodity
    (iv)   National Information Policy

Unit 5: Knowledge Management
    (i)   Knowledge Management: Concept and Scope
    (ii)   KM System, Information Management Vs Knowledge Management
    (iii)   Stage and Process of Knowledge Management
    (iv)   Tools of Knowledge Management

Paper XIV: Elective

      XIV (a) Information Sources & Products in Science & Technology
      XIV (b) Information Sources & Products – Social Sciences
      XIV (c-1) Bibliometrics and Scientometrics$^{\Psi}$ ---3 Credits
      XIV (c-1) Yoga$^{\Psi}$ ---2 Credits   } 5 Credits

XIV (a) Information Sources & Products in Science & Technology

Unit 1: Science & Technology

    (i)   Overview of Major Subjects of Science &Technology
          a. Physics
          b. Chemistry
          c. Engineering & Technology

Unit 2: Sources of Information
    (i)   Primary Sources of Information: Periodicals, Research Reports, Patents, Specifications etc.
    (ii)   Secondary Sources of Information: Bibliographies, Indexes and Abstracts, Encyclopedia, Year book etc.
    (iii)   Evaluation of Important Secondary Sources from the view of their Information Value
    (iv)   Databases in Science & Technology

Unit 3: Role of Research Institutes &Professional Organizations in the development of Science &Technology
    (i)   India
    (ii)   U.K.
    (iii)   USA

Unit 4: Information Systems and Services in Science &Technology

    (i)   National
    (ii)   International

Unit 5: Information Analysis & Repackaging

   (i)   Content Analysis
   (ii)   Consolidation
   (iii)   Repackaging

$^{\Psi}$ Course offered through Swayam Portal.

XIV (b) Information Sources & Products in Social Sciences

Unit 1: Overview of Social Science

(i) Developments in Major Subjects of Social Science

   a. Sociology
   b. Political Science
   c. History
   d. Economics

Unit 2: Sources of Information

(i) Primary Sources of Information: Periodicals, Research Reports, Patents, Specifications etc.
(ii) Secondary Sources of Information: Bibliographies, Indexes and Abstracts, Encyclopedia, Year book etc.
(iii) Evaluation of Important Secondary Sources from the view of their Information Value
(iv) Databases in Social Sciences

Unit 3: Role of Research Institutes & Professional Organizations in the Development of Social Sciences

   a. India
   b. UK
   c. USA

Unit 4: Information Systems and Services in Social Science

(i) National
(ii) International

Unit 5: Information Analysis and Repackaging

(i) Content Analysis
(ii) Consolidation
(iii) Repackaging

Paper XV: Information Users & Needs

Unit 1: Information Users

    (i)   Identification of Users
    (ii)   Concept of Need, Want, Demand & Requirement
    (iii)   User Categories: Planners, Policy Makers, Managers, R&D Personnel, People at Grass Root Level
    (iv)   Information Seeking Behavior Models

Unit 2: Uses of Information

    (i)   Uses of Information in Management activities
    (ii)   Uses of Information in Decision Making
    (iii)   Uses of Information in R & D
    (iv)   Role of Information in Raising the Standards & Quality of Life
    (v)   Technology Innovation & Technology Transfer

Unit 3: User Studies

    (i)   Scope and Content of User Studies
    (ii)   Studies by Types of Libraries : Different User Groups, Different Disciplines
    (iii)   Critical Review of Some Large Scale User Studies

Unit 4: Methodology of User Studies

    (i)   Qualitative & Quantitative Paradigm
    (ii)   Data Collection Methods
    (iii)   Other Specific Techniques– Scenario Analysis, Interaction Analysis, Delphi Method, Repertory Grid
    (iv)   Evaluation of User Survey

Unit 5: Information Literacy

    (i)   Information Literacy: Concept and Types
    (ii)   Information Literacy Models Concept & Importance of User Education
    (iii)   User Education Methods

Paper XVI: Information Technology Applications (Practical)

    (i)   Digitization
    (ii)   Creation & Maintenance of Digital Library
    (iii)   Library Automation

Note: 20 marks will be reserved for viva-voce in Semester Exam.