# HEMCHAND YADAV VISHWAVIDYALAYA, DURG (C.G.)

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# SCHEME OF EXAMINATION
## &
# SYLLABUS
## of
# Master of Library &Information Science (M.Lib. & I.Sc.)

## for
## Semester System Examination

### Session 2022-23

**(Approved by Board of Studies)**
**Effective from July 2022**

# Structure of M. Lib. I. Sc. Programme

## FIRST SEMESTER

Total Credits - 20

| Paper | Subject | Internal Marks | External Marks | Credits |
|-------|---------|----------------|----------------|---------|
| I | FOUNDATION OF INFORMATION SCIENCE | 20 | 80 | 4 |
| II | KNOWLEDGE ORGANISATION & INFORMATION PROCESSING | 20 | 80 | 4 |
| III | RESEARCH METHODS & STATISTICAL TECHNIQUES | 20 | 80 | 4 |
| IV | MANAGEMENT OF LIBRARY & INFORMATION CENTRES/INSTITUTION | 20 | 80 | 4 |
| V | INFORMATION PROCESSING AND RETRIEVAL (PRACTICE-I) | 20 | 80 | 4 |
| | Total | 100 | 400 | 20 |

## SECOND SEMESTER

Total Credits - 20

| Paper | Subject | Internal Marks | External Marks | Credits |
|-------|---------|----------------|----------------|---------|
| VI | INFORMATION RETRIVAL | 20 | 80 | 4 |
| VII | INFORMATION SOURCES, PRODUCTS AND SERVICES | 20 | 80 | 4 |
| VIII | INFORMATION TECHNOLOGY : BASICS & APPLICATIONS | 20 | 80 | 4 |
| IX-A | MANAGEMENT INFORMATION SYSTEMS. | 20 | 80 | 4 |
| X | INFORMATION PROCESSING & RETRIVAL (PRACTICE – II) | 20 | 80 | 4 |
| | Total | 100 | 400 | 20 |
| | Total Marks of Semester I & II | 200 | 800 | 40 |

# FIRST SEMESTER

## Learning Outcomes and Syllabus Contents of Each Course

### Paper-I FOUNDATION OF INFORMATION SCIENCE

**Learning Outcomes:**

**After studying this paper, students shall be able to:**

1. Comprehend the concept of information and the discipline of Library and Information Science.
2. Understand the concept of use of Information and communication channels.
3. Understand the Information user & their needs.
4. Know about the International and national programs and policies
5. Understand the Information products: Nature, concept, types, design and development and marketing.
6. Understand the Economics of Information.

### Full Marks: 100 (Theory: 80, Internal Assessment: 20) Pass Marks 36%

**UNIT-1: Information Science-**

- Definition, Scope, Objectives, Genesis and development.

- Information Science as a discipline and its relationship with other subject fields.

- Information industry- Generators, Providers and intermediaries.

**UNIT-2: Information and communication-**

- Information: Characteristics, Nature and use of information.

- Conceptual difference between data,

- Information and Knowledge.

- Communication of Information.

- Information generation and diffusion.

- Communication channels and barriers.

**UNIT-3: Information and the state-**

- Policies relating to information including science and technology and education.

- International and national programs and policies (NAPLIC)

- IT and library.

- UAP, UBC

- Laws relating to information with special reference to India. Including press and registration act. Delivery of books (public Libraries) Act, Copyright Act.

### UNIT-4: Information user & their needs-

- Categories of information users.

- Information needs: definition and models.

- Information seeking behavior.

- Methods and techniques of user studies.

- Evaluation of user studies.

### Unit-5: Information products-

- Information products: Nature, concept, types, design and development and marketing.

- Economics of information.

- Information management.

- Knowledge management.

## Paper-II KNOWLEDGE ORGANISATION & INFORMATION PROCESSING

### Learning Outcomes:
### After studying this paper, students shall be able to:

1. Know about different types of subjects and their modes of formation of subject.
2. Understand the standard schemes of library classification and its features and application.
3. Know about canons and normative principles.
4. Understand choice of schemes of classification.
5. Elucidate various facets of notation and call number.
6. Understand the design and development of a Scheme of library classification.
7. Understand the Postulates and Principles of for facet sequence
8. Know about recent trends and development of classification.

### Full Marks: 100 (Theory: 80, Internal Assessment: 20) Pass Marks 36%

### UNIT-1: Universe of Knowledge-

- Structure and attributes.

- Modes of formation of subjects.

- Different types of subjects and their modes of formation
- Universe of Knowledge as mapped in different schemes of classification.

## UNIT-2: Methods of knowledge organization-

- Canons and normative principles of sayers and Ranganathan of classification.
- Species of Library Classification schemes.
- Standard schemes of library classification; Introduction, features and application-CC, DDC, & UDC.

## UNIT-3:

- Universal and special schemes of classification.
- Abstract classification.
- Choice of schemes of classification.
- Study of categories postulated by different classificationists for grouping ideas.
- Postulates & Principles for facet sequence.
- Telescoping of facets.

## UNIT-4: Notation-

- Notation: Types, Structure & qualities, canons of notation.
- Mnemonics- Types and canons
- Indicator digits.
- Zone analysis and sector notation.
- Canons for book classification.
- Systems of book number.
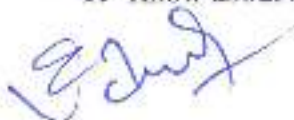
## UNIT-5: Recent Trends & Developments-

- Design and development of a Scheme of library classification.
- Role of DRTC, CRG and FID.
- Contribution of International Conferences towards classification research.
- BSO: Salient features.

## Paper-III RESEARCH METHODS & STATISTICAL TECHNIQUES

## Learning Outcomes:
### After studying this paper, students shall be able to:

1. Know about research: concept of research and process of research.

2. Understand the research design and Identification and formulation of problem of research.
3. Understand the hypotheses, testing of hypotheses.
4. Know about research methods, tool and technique.
5. Understand Data analysis and Interpretation, tabulation and generalization.
6. Understand the design and development of content analysis.
7. Understand the Citation-theory and analysis.
8. Understand Designing research proposal.
9. Understand the citing bibliographical references.
10. Know about current trends in library and information science research.

## Full Marks: 100 (Theory: 80, Internal Assessment: 20) Pass Marks 36%

### UNIT-1: Research-

- Research: Concept, Meaning, need and process of research.
- Types of Research- Fundamental and Applied.
- Research Design- Types of research design, Identification and formulation of problem, Hypotheses.

### UNIT-2: Research methods-

- Research Methods- Scientific, Historical, Descriptive, Survey and case study methods, Experimental method and Delphi Method.
- Research techniques & Tools- Questionnaire, Schedule interview, Observation and sampling techniques.

### UNIT-3: Data analysis and Interpretation-

- Descriptive Statistics- Measures of central tendencies- Mean, Median, Mode.
- Tabulation and generalization.
- Standard Deviation and Correlation.
- Testing of hypotheses.

### UNIT-4: Bibliometrics, Informatrics & Scientometrics-

- Bibliometrics, Informatrics & Scientometrics: Concept definition and their scope
- Bibliometrics laws- Bradford, Zipf, Lotka.
- Content analysis.
- Sociometry.
- Citation studies- Citation-nature and definition, Citation-theory and analysis.
- Offset weight age formula of Sengupta.

### UNIT-5: Research reporting- Designing research proposal-

- Structure, Style, Contents & Guidelines for Research reporting.
- Standards for citing bibliographical references (Like Chicago manual, MLA & Indian standards)
- Current trends in library and information science research

## Paper-IV MANAGEMENT OF LIBRARY & INFORMATION CENTRES/INSTITUTION

## Learning Outcomes:
## After studying this paper, students shall be able to:

1. Understand the concept of management.
2. Understand the function and Principles of Scientific Management.
3. Know the Organization structure, Job analysis and description; Job evaluation.
4. Understand motivation theory.
5. Understand budgeting technique & methods
6. Know the role of libraries in the development of various aspects of society.
7. Understand the routine work- acquisition, processing, management, maintenance, and dissemination of information and information sources.
8. Understand Financial Management, Budgeting technique & methods.
9. Assess the role of national and international library associations and organizations.
10. Know about the Total Quality Management and SWOT analysis.
11. Understand the Strategic management: objectives. Policies process & models.
12. Know about Collection development and managing change.

## Full Marks: 100 (Theory: 80, Internal Assessment: 20) Pass Marks 36%

### UNIT-1 Management

- Management styles and approaches.
- Management schools of thought.
- Functions and Principles of Scientific Management.
- Human Resource Management- Organization structure, Job analysis and description; Job evaluation, Motivation.

### UNIT-2 Financial Management-

- Resource mobilization.
- Budgeting technique & methods; PPBS. Zero based budgeting etc. Budgetary control.
- Cost effectiveness and cost benefit analysis.
- Total Quality Management (TQM)- Definition, Concept & elements of TQM and quality audit.

### UNIT-3 System Analysis and Design-

- System- definition, Concept and characteristics.
- Library as a system.

- Project management,
- PERT/CPM.
- Decision tables.
- DFD (Data Flow Diagram).
- Work study: Flow chart, Gantt chart, Block diagrams.

## UNIT-4 Planning-

- Concept, Definition, Need, Purpose, Types, Policies and Procedures.
- MBO,MBE
- Strategic management- Definition objectives, Policies process & models of strategic management.
- SWOC analysis,

## UNIT-5 Managing Change

- Concept of change: changes in procedures, method.
- Use of new tools and techniques;
- Techniques of managing change.
- Collection development and management- Policies and procedures.
- Time and motion study.

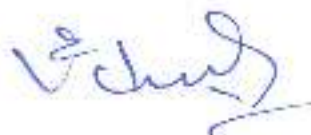## Paper-V INFORMATION PROCESSING AND RETRIEVAL (PRACTICE-I)

## Learning Outcomes:
## After studying this paper, students shall be able to:

1. Construct class numbers for documents with simple, compound and complex subject.
2. Synthesize class numbers by using the standard subdivisions/common isolates/auxiliary tables.
3. Compile book numbers and be able to use index of the classification scheme.
4. Discuss the Steps in practical classification.

## Full Marks: 100 (Theory: 80, Internal Assessment: 20) Pass Marks 36%

Classification of titles/documents by Colon Classification (6 $^{th}$ Rev. Ed.) and UDC (Medium Edition).

# SECOND SEMESTER

## Paper-VI INFORMATION RETRIEVAL

### Learning Outcomes:
### After studying this paper, students shall be able to:

1. Understand the concept of library catalogue.
2. Know about the subject analysis and representation.
3. Know about subject headings using sears list of subject heading etc.
4. Understand the Indexing language and vocabulary control.
5. Know about the coordinate indexing system.
6. Understand the Standards for Bibliographical Description like AACR-2, ISBD, MARC (Format), CCF.
7. Know about Information Retrieval Systems.
8. Understand the principles & methods of searching.
9. Know about IR through OPAC and Internet.

### Full Marks: 100 (Theory: 80, Internal Assessment: 20) Pass Marks 36%

### UNIT-I: Subject analysis and representation-
- Problems of subject analysis and representation.
- Contributions of cutter, Ranganathan, Farradane and Coates.
- Principles of subject cataloguing- Assigning subject-Headings using library of Congress subject headings and sears list of subject heading etc.
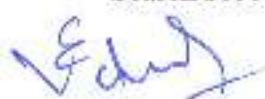
### UNIT-II: Indexing language and vocabulary control-

- Indexing languages- Types and characteristics.
- Vocabulary control- Tools of vocabulary control.
- Thesaurus- Structure and construction of an IR Thesaurus. Thesaurofacet.
- Trends in automatic indexing.
- Recall and Precision devices in indexing languages.

### UNIT-III: Indexing systems-

- Pre coordinate and post coordinate indexing system.
- Outline study of the following indexing systems.
- KWIC, KOWC.
- Chain Indexing, PRECIS, POPSI.
- Uniterm indexing. Citation indexing.
- Standards for Bibliographical Description: AACR-2, ISBD, MARC(Format), CCF.

### UNIT –IV: Information Retrieval Systems-

- Definition, Types, Components and operational stages of IRS.
- Information Retrieval- Data Base, Information base and SQL. IR Models.
- Search Process- Principles & methods of searching.

- Search Techniques- Boolean searches On-line searching techniques and retrieval.

## UNIT-V: Information retrieval systems evaluation.

- Projects and parameters.
- Important test results- Cranfield, Medlars, Smart.
- Information retrieval through optical media and CD-ROM data base.
- IR through OPAC and Internet.

## Paper-VII INFORMATION SOURCES, PRODUCTS AND SERVICES

## Learning Outcomes:
## After studying this paper, students shall be able to:

1. Understand the documentary sources of information.
2. Understand, identify and explore the different types of information sources like print, non-print including electronic nature.
3. Know about bibliographic and referral services.
4. Understand the information products- Nature, Concept, Types, Design and marketing Abstracting
5. Know the users education: technique and methods.
6. Understand resource sharing.
7. Understand library networking.
8. Know about the international information system and network.

## Full Marks: 100 (Theory: 80, Internal Assessment: 20) Pass Marks 36%
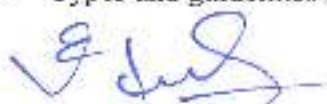
### UNIT-I: Information sources-

- Documentary sources of information.
- Print, Non-print including Electronic Nature.
- Characteristics, Utility and evaluation of different types of information sources.
- Non Documentary Information sources; Human and institutional – Nature, Types, Characteristics and utility.
- Internet as a source of information.

### UNIT-II: Information services-

- Information services- Concepts, Definition need and trends.
- Techniques and evaluation of alerting services (CAS & SDI).
- Bibliographic, Referral.
- Document delivery and translation services.

### UNIT-III: Information Products-

- Information products- Nature, Concept, Types, Design and marketing. Abstracting.
- Types and guidelines in preparing abstracts.

- Study and evaluation of important abstract periodicals information analysis, Repackaging and consolidation.

### UNIT- IV: User Educations-

- Goals and objectives, Levels, Technique and methods.
- Reference interview and search techniques.
- Resource sharing and library networking.
- Study of Indonet, Inflibnet, Calibnet, Nicnet, Delnet, Adinet, Malibnet.

### UNIT-V:

- International information system and network.
- AGRIS, BIOSIS, CAS Scfinder, DEVSIS, ICSU, INIS, INSPEC, MEDLARS.

## Paper-VIII INFORMATION TECHNOLOGY: BASICS & APPLICATIONS

### Learning Outcomes:
### After studying this paper, students shall be able to:

1. Understand the structure of computer and functions of its various units.
2. Know about create, edit and manage files using Word processing and Power Point Presentation software.
3. Understand the hardware and software.
4. Understand Internet-Basic features and tools.
5. Carry out library housekeeping operations using library management software.
6. Find bibliographic information from Web OPAC.
7. Understand the using library management software.
8. Know about library and information networking.
9. Know about data base management system.
10. Understand the digital libraries.
11. Examine the concept of library networks and highlight their types and importance.
12. Understand automation of in- house operations- Acquisitions, Cataloguing, Circulation, OPAC, Bar-coding.

### Full Marks: 100 (Theory: 80, Internal Assessment: 20) Pass Marks 36%

### UNIT-I Information Technology-

- Definition, need, scope and objectives.
- Historical background of computers.
- Generation of computers.
- Architecture CPU, Input/output devices.
- Hardware and software.
- Operating system-Ms-windows, UNIX, MS-DOS.

## UNIT-II Networking-

- Types of networks-LAN, WAN, MAN.
- Local Area Networks; LAN Topologies, Network Hardware- Network interface card, hubs/switches.
- Getaways/Bridges, routes, modem.
- Network Protocols- TCP/IP, Net-BUI, IPX.

## UNIT-III Internet-Basic features and tools-

- Connectivity- Dialup, Leased lines, Microwave, ISDN.
- Digital Subscriber Lines (DSL).
- E-mail-Protocols- Telnet, FTP, DTTP. Web browsers, Web servers, Search Engines, Keta Search,
- Web design- SGML, HTML, DHTML and XML.

## UNIT-IV Data Base Management System-

- Models- Hierarchical, Network, Relational and object oriented.
- Software- CDS/ISIS, SOUL.
- Structure Query Language. Artificial Intelligence.
- Digital libraries- definition, characteristics & attributes,
- Storage media formats- DVD.

## UNIT-V  Library Automation-

- Planning and implementation of library automation.
- Automation of in- house operations- Acquisitions, Cataloguing, Circulation, OPAC Barcoding, Serial Control.
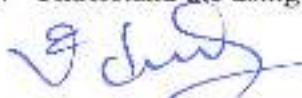
## Paper- IX (A) MANAGEMENT INFORMATION SYSTEMS.

### (Any one of the following)

## Learning Outcomes:
## After studying this paper, students shall be able to:

1. Understand the management information system.
2. Know about MIS features, approaches.
3. Understand the MIS Systems analysis; Systems design.
4. Understand the management reporting system.
5. Understand the Decision Support Systems (DSS);
6. Understand the Office Automation Systems (OAS);
7. Understand the Knowledge Based Systems.
8. Understand the Internet and intranet -Basic features and tools.
9. Understand the using library management software.

10. Know about library and information networking.
11. Know about data base management system.
12. Understand the data communication.

## Full Marks: 100 (Theory: 80, Internal Assessment: 20) Pass Marks 36%

- IX-A Management Information Systems.
- IX-B Business Information Systems.
- IX-C Biotechnology Information Systems.
- IX-D Health science Information Systems.
- IX-E Agricultural Information Systems.
- IX-F Social Science Information Systems.

**(Note- In the initial stage only one information system, i.e. "IX-A; Management information Systems" is being implemented.)**

## Paper – IX ELECTIVES; Information Systems (Any one of the following)

### UNTI-I

- Definition, concepts, elements and objectives of M.I.S.
- Information and management effectiveness.
- Information needs and management levels.
- Features of MIS system approach to MIS.
- Properties of MIS.

### UNTI-II

- Structure of MIS.
- MIS and decision making.
- Planning for MIS-Systems analysis; Systems design.
- Techniques of system analysis; Techniques for MIS planning.

### UNIT-III: Information Support System-

- Management reporting systems (MRS);
- Decision Support Systems (DSS);
- Office Automation Systems (OAS);
- Knowledge Based Systems.

### UNIT IV: Functional Informational Systems-

- Financial Information Systems: Marketing IS; & Human resource IS.
- Implementation, Evaluation & Maintenance of MIS.

### UNIT V

- Role of Computer in MIS.
- Data Base Management.
- Data Base Software-Software needs selection and development.
- Data communication and networking.
- Using Information superhighways- Internet and Intranet.

## PAPER- IX-B Academic Library and Information System

### Unit – 1 Academic Library

- History and Development of Libraries with special reference to India
- Role of Academic Library in Education
- Academic Library as a support System for Education

### Unit – 2 Development of Academic Library

- Role of UGC in Promoting Academic Libraries, University College and other Institutions
- Role of library authorities of the Institutions in Promoting Library Resources
- Development of Library Services
- Financial Management of Academic Libraries

### Unit – 3 Collection Developments

- Collection Development Policy, Weeding policy
- Problems in Collection Organization in an Academic Library
- Collection Development Programmes, Allocation of Funds to Collection Procurement,
- Curriculum and Collection Development
- Library Committees and their Role in Collection Development

### Unit – 4 Staffing and Staff Development for Academic Library

- Norms and Patterns for Staffing in University, College and School Libraries
- Continuing Education Programmes for Academic Library Development
- Personal Management in Academic Library

### 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

## PAPER- IX-C Archival, Museum and Archaeological Information System

### Unit - 1 History and Development

- History and Development and types of Archival Centers
- Kind and identification of Archival material

## Unit-2 Organisation and Management of Archival and Manuscripts

- Acquisition, Classification, Cataloguing and Indexing of Archival material
- Source material on Archival , Manuscripts
- Machine Readable and Microfilm of Archival records
- Database and Digitization of Archives
- Role of UNESCO and other agencies

## Unit -3 Environment Control

- Building Design
- Planning and furniture and Fillings
- Use of Copy Right to information in relation to archives

## Unit - 4 Preservation of Archives

- Objective and Purpose
- Cause of Deterioration
- Environmental Pollution : Physical , Chemical and Atmospheric
- Biological enemies of materials : Mould , Fungi , Insect and Rodents

## Unit – 5 Rehabilitation of Documents

- Cleaning, removal of Stains
- Fuming and deacidification
- Repair and restoration techniques
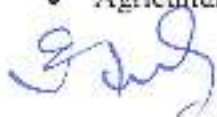- Lamination
- Standards for Storage Conditions

## PAPER- IX-D Agricultural Information System

### Unit - 1 Agriculture 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-3 Organization and Management of Resources

- General Principle of Information Management
- Information Organization, Processing and Dissemination
- Developing need based and on Demand Specialized Services

## Unit – 4 Information Needs

- Identifying special need of Agricultural faculty & research Staff
- User Studies of Local Agriculture Libraries

## Unit - 5 Agriculture 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.

## PAPER- IX-E Legal Information System

### Unit- 1 Law Librarianship

- 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 - 3 Organizations and 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 needs 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 - 5 Legal Information System & Networks

- Legal information System :National and International
- Structure and their services
- Legal Database and Digital Libraries
- Resource and Networks of Legal Information

## PAPER- IX-F Industrial Information System

## Unit - 1 Growth 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 – 3 Organizations 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 – 4 Information needs 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

## PAPER – X INFORMATION PROCESSING & RETRIVAL (PRACTICE- II) (AACR-2)

## Learning Outcomes:
## After studying this paper, students shall be able to:

1. Use the catalogue codes and standards.
2. Understand the concept of library catalogue.
3. Know about the main and added entries of library catalogue.
4. Know about various inner and outer forms of library catalogue.
5. Understand various approaches of deriving subject headings.
6. Prepare catalogue entries for various types of information sources.
7. Derive subject headings using various methods and tools.

## Full Marks: 100 (Theory: 80, Internal Assessment: 20) Pass Marks 36%

### Cataloguing of Publications by AACR-2