

# PET - 2016

## LIBRARY AND INFORMATION SCIENCE SYLLABUS

Note: There will be two question papers. Paper-I will cover Aptitude Test (Multiple choice, Match type, True/False, Assertion-Relation type) carrying 40 marks and Paper-II will have 2 long questions carrying 15 marks each (Only one question have to be solved). Subject related questions will have 6 Short questions carrying 10 marks each (3 questions have to be solved) and 6 short questions carrying 5 marks each (3 questions have to be solved). Total of Paper-II will be 60 marks.

### PAPER II

#### Unit-I

Research: Concept, Meaning, Need and Purpose of research; Types of Research Fundamental and Applied including inter-disciplinary and multi-disciplinary approach; Research and Development of Scholarship. Research Design: Conceptualization and nationalization; Types of Research Design; Identification and formulation of problem; Hypotheses, Nominal and Operational definition; Designing Research Proposal; Ethical aspects of Research; Literature Search – Print, Non-print and electronic sources. Research Methods: Scientific Method; Historical Method; Descriptive Method; Survey Method and Case Study Method; Experimental Method and Delphi Method. Research Techniques and Tools: Questionnaire; Schedule; Interview; Observation; Proforma Method; Scales and Check lists; Library Records and Report Analysis; Sampling techniques. Research Reporting: Structure, Style and contents; Guidelines for Research Reporting; Style Manuals – Chicago, MLA and APA etc.; E-Citation and Methods of Research Evaluation.

#### Unit-II

Information and Communication: Information, Characteristics, Nature, Value and Use of Information; Conceptual difference between Data, Information and Knowledge; Communication of Information: Information generation; Trends in Scientific Communication. Information Science: Definition, Scope and Objectives; Information Science as a discipline and its relationship with other subjects. Library, Information and Society: Genesis, Characteristics and implications of Information Society; Changing role of Library and Information Centres in Society; Information Industry Generations, Providers & Intermediaries; Concept of Freedom, Censorship, Data Security and Fair Use; Policies relating to Information, Right to Information including Sciences and Technology, Education; International and National Programmes & Policies ( NAPLIS), IT & Library, UAP, UBC. Library as Social Institution: Social and historical foundations of Library; Different types of Libraries – their distinguishing features and functions; Role of Library in formal and informal education. Normative Principles of Library & Information Science: Five laws of Library Science; Implications of Five laws in Library and Information activities. Library Development: Development of Libraries with special reference to India; Resource sharing and Library Networking. Laws relating to Libraries

& Information: Library Legislation need and essential features; Library Legislation in India; Press and Registration Act and Delivery of Books (Public Library) Act.; Copy Right Act; Library & Information Profession: Attribution of profession; Librarianship as a profession; Professional ethics; Professional associations and their role.; National and International Library Associations; Professional Education and Research. Public relations and Extension activities: Definition; Facets and Programs; Promoters of Library and Information Services: National level promoters --- RRRLF; International level promoters --- UNESCO.; Publicity and Extension, Out reach activities; Library Path Finders (Guides); Consultancy including promotional Web Tools.

### **Unit-III**

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. Bibliographic Description: Catalogue purpose, structure and types; Physical forms including OPAC and filling rules; Normative Principles of Cataloguing; Overview of principles and practice in document description; Current trends in standardization, description and exchange; Standard codes of cataloguing. Methods of Knowledge Organization: General theory of Library Classification; Normative Principles of Classification and their application; Species of Library Classification; Standard schemes of Classification and their features, CC, DDC & UDC; Design and Development of schemes of Library Classification; Trends in Library Classification.

### **Unit-IV**

Management: Concept, definition and scope; Management styles and approaches; Management schools of thought; Functions and principles of Scientific Management. Human Resource Management: Organization structure; Delegation, Communication and participation; Job description and Analysis of Job Evaluation; Inter-personal relations; Recruitment procedures; Motivation, Group Dynamics; Training and Development; Disciplines and Grievances; Performance Appraisal. Financial Management: Resource mobilization; Budgeting techniques and methods PPBS, ZBB etc.; Budgetary control; Cost effectiveness and Cost benefit analysis; Economics of Information; Outsourcing. Reporting: Types of report, Annual report – computation, contents and style; Library Statistics etc. System Analysis and Design: Library as a system; Project Management, PERT/CPM; Decision Tables; Performance evaluation standards, MIS; Performance measurements, Reengineering, Time & Motion study; SWOT (Strength Weakness Opportunity and Threat); DFD (Data Flow Diagram). Total Quality Management (TQM): Definition, Concept and Element; Quality Audit, LIS related Standards. Library House Keeping Operations: Different sections of Library and Information Center and their functions; Collection Development and Management Policies, Procedures; Book ordering (Acquisition); Technical Processing; Serials control, Circulation control, Maintenance etc.; Stock verification policies and procedures; Evaluation and Weeding; Archiving – conservation & Preservation; Restoration including print, non-print and electronic materials. Planning: Concept, Definition, Need, Purpose and types; Policies and Procedure, MBO; Building and Space Management in Libraries and Information Centers; Risk Management, Contingency Management; Planning of related Infrastructure, Library standards. Management of Change: Concept of change; Changes in procedures, methods, tools and techniques; Problems of Incorporating change; Techniques of managing change. Knowledge Management: Definition; Scope, Types and other features.

## **Unit-V**

Reference and Information Sources: Documentary Sources of Information, Print and 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; Categories: Primary, Secondary and Tertiary Information Sources; Internet as a source of Information. E-resources: Electronic sources, Digital sources and Web resources. Information Users and their Information Needs: Categories of Information Users; Information Needs, Definition and Models; Information Seeking Behaviour; User Studies: Methods, Techniques and evaluation.

## **Unit-VI**

Reference Service: Concept, Definition and trends; Reference interview and Search technique. Information Services and Products: Information services and products; Information services: concepts, definitions, need and trends; Need, techniques and evaluation of Alerting services (CAS & SDI); Bibliographic, Referral, Document Delivery, Trend Report, Resource Sharing, Consortia, Online services, Reprographic Services & Translation Services. Information Systems and their Services: Study of National, International and Commercial Information Systems and Services – Background, their services and products. User Education: Goals and objectives, level, techniques and methods; Evaluation of users education programmes / user studies. Information Reading Skills.

## **Unit-VII**

Information Technology: Definition, Need, Scope and Objectives. Computer Basic (Hardware): Historical development of computers; Generation of Computers, Classification of Computers. Computer Architecture—Organization of Computer: Input and Output Devices. Software: Operating Systems: Single & Multi User Systems, Basic features of MS-DOS, MS-Windows, Linux, Unix, Window-NT, etc.; Programming languages: concept and Tools; Algorithm & Flowcharting. Word Processor, Spread Sheets etc. DBMS Package: DBASE, FOXPRO, CDS/ISIS, SOUL, LIBSYS, MS-ACCESS (basic features). Library Automation: Planning, Implementation and Library Automation. In-house Operations—Acquisition, Cataloguing, Circulation, Serials Control, OPAC, Library Management. Multilingual Bibliographic Database: Library Automation Software Packages; their study and composition.

## **Unit-VIII**

Communication Technology: Fundamentals of Telecommunication Technology, Media, Mode and Components; Network Media, UTP, Optical Fiber, Ethernet, Network Interface Card, Hubs, Routers and Modems; Network types and Topologies, LAN, WAN & MAN; Bus, Star, Ring, Token Ring etc.; Local Area Network – types and topologies. INTERNET: Basic features and tools: Network based Information Services; Connectivity: Drupe, Leased lines, ISDN, Digital Subscriber lines; E-mail, SMTP, Wireless, POP3; Protocols – FTP, HTTP; Web Browsers – Netscape Navigator and Internet Explorer; Web Servers, Web tools and Search Engines; Internet Security; Teleconferencing, Tele facsimile, Teletext and Videotext; Virtual Library; Electronic Library. Digital Libraries: Genesis, Definition, Objectives, Scope of Digital Libraries; Image formats, Audio formation; Storage media formats – ISO-9660, DVD; Software

and Hardware for Digital Libraries, OCR, Image Editing Software; Input capture devices, Scanners, Digital Movie Cameras; Data Warehousing, Data Mining and Metadata; Artificial Intelligence & Expert System (with reference to LIS).

### **Unit-IX**

Cataloguing & Subject Indexing: Principles and Practices: Principles of Subject Cataloguing: Assigning Subject Headings, Using Library of Congress Subject Headings and Sear's List etc.; Models Assigned and Derived; Pre & Post Coordinate Indexing System and Citation Indexing. Indexing Language & Vocabulary Control: Indexing Language: Type and Characteristics; Vocabulary Control; Tools of Vocabulary Control; Structure and Construction of IR Thesaurus; Trends in Automatic Indexing. Information Retrieval: IR Models, Search Strategies, Manual/Machine, Feedback and Refining; Evaluation of Information Retrieval System; Project and Parameters; Trends in IR Models. Databases: Search Strategies, Boolean Operators. Information Processing and Organization; Current trends in Information Storage and Retrieval.

### **Unit- X**

Data Analysis and Interpretation: Descriptive Statistics, Measures of Central Tendency – Mean, Mode and Median; Tabulation and Generalization; Measures of Dispersion, Variance and Covariance; Standard Deviation; Graphical presentation of Data Bar, Pie & Line Graphs, Histograms etc.; Inferential Statistics; Z-test, T-test, Correlation; Regression linear and Non-linear; Chi Square Test; Sociometry; Statistical packages – SPSS; Statistical Graphics etc. Bibliometrics, Scientometrics and Informatics: Definition and Concept; Bibliometric Laws; Bradford, Zip and Lotka; Bibliographic coupling; Obsolescence; Citation Analysis; Webometrics; Citation studies; Informatics; Scientometrics.

### **Unit-XI**

Institutional Repository; Information Literacy: Need, Methods, Contents, Standards; E-governance; Re-engineering of Library Services; Marketing Skills and Techniques; Collection Development Policy including e-resources; Six Sigma; Brain Storming; Mind Mapping and other recent technologies; Stress Management; Technical Writing; Information Consolidation and Repackaging; Conservation and Preservation of Information; E-publishing; Community Services and Systems