**Department of Library & Information Science**

**Kurukshetra University Kurukshetra**

**(Established by the State Legislature Act XII of 1956)**

**(A+ Grade NAAC Accredited)**

**Syllabus for Ph.D. Entrance Test in Library and Information Science**

**Instruction for the Examiners**

The syllabus is divided into 6 units. The examiners will be required to set 40 question from unit 1 and 60 questions from unit II to Unit VI(select 12 questions from each unit.)

**Instruction to be given to the examinee in the paper:**

For each correct response the candidate will get 2 marks. There shall be no negative marks for incorrect response. No marks will be given for unanswered questions

**Unit – I: Research Methods in Library and Information Science**

* Concept, Meaning, Need and Process of Research, types of Research – Fundamental and Applied.
* Types of Research Design.
* Hypothesis: Definitions, Functions and Types.
* Designing Research Proposal.
* Ethical Aspects of Research.
* Research Report Writing: Style Manuals
* Research Methods and their application in LIS: Historical, Survey and Experimental Methods.
* Bibliometric Study and its technique.
* Library Case Studies, User Studies, Evaluation Research, Comparative Librarianship, Documentary Research.
* Research Techniques and Tools: Questionnaire, Interview, Observation.
* Probability and Non-probability Sampling Methods; Sample Size Determination; and Sampling and Non-sampling errors.
* Classification of Data: Types of Classification
* Tabulation of Data: Rules of Tabulation and Types of Tables
* Diagrams: Rules for construction of Diagrams; Types of Diagrams
* Graphs: Types of Graphs, Techniques of construction;
* Types of Averages, their calculation and use in different types of Library Data
* Variation and its calculation; Methods of studying Variation
* Types of Correlation and Methods of studying Correlation
* Hypothesis testing procedure (Application on Library Data); χ2 Test; F-Test and Analysis of Variance

**Unit II: Library and Information Society**

* Types of Libraries – Academic, Public, Special and National.
* Laws of Library Science.
* Library Legislation and Library Acts in Indian States.
* Professional Ethics.
* Professional Associations - National – ILA, IASLIC, IATLIS; International – IFLA, ALA, CILIP, ASLIB, SLA; Role of UGC, RRRLF and UNESCO in Promotion and Development of Libraries.
* Information Literacy - Areas, Standards, Types and Models; Trends in Information Literacy.
* IPR and Copyright.
* Plagiarism.
* Library Resource Sharing and Library Consortia – National and International.

**Unit – III: Information Sources and Services**

* Information Sources - Nature, Characteristics, Types, Formats and Evaluation of Reference sources and web resources.
* Sources of Information (Print and Electronic) – Primary; Secondary and Tertiary.
* Electronic Information Resources - Subject Gateways, Web Portals, Bulletin Boards, Discussion Forums /Groups.
* Databases: Bibliographic, Numeric, Full text, Multimedia; Open Access Databases
* Reference Service – Concept and Types; Referral Services
* Mobile based Library Services and Tools – Mobile OPAC, Mobile Databases,Mobile Library Website, Library Apps, Mobile Library Instructions, Augmented Reality, SMS Alerts, Geo-Location, Reference Enquiry.
* Web 2.0 and 3.0 - Library 2.0- Concept, Characteristics, Components; Instant Messaging, RSS Feeds, Podcasts, Vodcasts, Ask a Librarian
* Collaborative Services- Social Networks, Academics Social Networks, Social Tagging, Social Bookmarking.
* National Information Systems and Networks: NISCAIR, DESIDOC, ENVIS, INFLIBNET, DELNET, National Knowledge Commission.
* International Information Systems and Networks: INIS, AGRIS, INSPEC, MEDLARS, BIOSIS, ERIC.
* Indexing and Abstracting Services.

**Unit – IV: Knowledge Organization**

* Knowledge Organisation - Classification – Theories, Cannons; Simple Knowledge Organisation System (SKOS), Taxonomies, Folksonomy, Trends in Classification.
* Library Cataloguing Codes: CCC and AACR - II.
* Standards of Bibliographic Record Formats and Description – ISBD, MARC 21, CCF, RDA, FRBR, Bibframe.
* Standards for Bibliographic Information Interchange & Communication– ISO 2709, Z39.50, Z39.71.
* Metadata Standards: Dublin Core; MARC21, METS, MODES, EAD.
* Information Retrieval System – Features, Components, Models and Evaluation.

**Unit – V: Library and Information Centers Management**

* Management-Principles, Functions and Schools of thought.
* Library and Information Centers Management - Book Selection Tools and Principles; Library Acquisition, Technical Processing, Circulation, Serial Control, Maintenance and Stock Verification; Preservation and Conservation.
* Human Resource Management – Planning, Job Analysis, Job Description, Job Evaluation, Selection, Recruitment, Motivation, Training and Development, Performance Appraisal; Staff Manual.
* Financial Management in Libraries - Sources of Finance, Resource Mobilisation, Budgeting Methods; Cost Effective and Cost Benefit Analysis.
* Total Quality Management (TQM) - Concepts, Principles and Techniques, Six Sigma.
* Management Information System (MIS), MBO, Change Management, Disaster Management.
* Marketing of Library Products and Services – Plan, Research, Strategies, Mix, Segmentation, Pricing and Advertising; Management Consultancy.

**Unit – VI: Application of ICT in Library and Information Centres**

* Computer Technology- Character Representation (ASCII, ISCII, Unicode); Computer Hardware, Software; Storage Devices; Input and Output Devices.
* Types of Software - System Software, Application Software.
* Telecommunication- Transmission Channels, Mode, and Media, ISDN, PSDN, Multiplexing, Modulation, Standards and Protocols.
* Wireless Communication– Media, Wi-fi, Li-fi, Satellite Communication, Mobile Communication.
* Computer Networks - Topologies, Types of Networks – LAN, MAN, WAN.
* Internet - Web browsers, WWW, E-mail; Search Engines, Meta and Entity Search engines.
* Internet Protocols and Standards – HTTP, SHTTP, FTP, SMTP, TCP/IP, URI, URL.
* Library Automation – Areas, Planning, Selection of Hardware and Software, Implementation and Evaluation; Standards for Library Automation.
* Barcode, RFID, QR Code, Biometric, Smartcard: Features and Applications.
* Digitization – Planning, Selection of Materials, Hardware, Software, Process, Issues.
* Digital Library: Genesis, Characteristics, Types, Architecture; Standards, Formats and Protocols, DOI.
* Digital Preservation - Need, Purpose, Standards, Methods, Techniques, Project (National and International).
* Digital Library Initiatives – National and International.
* Institutional Repositories - Need, Purpose, Types and Tools; Institutional Repositories in India; ROAR, DOAR, SHARPA-ROMIO.
* Application of Artificial Intelligence, Expert Systems and Robotics in Libraries; Social Mobile Analytics Cloud (SMAC); Cloud Computing.
* Ontology – Tools (RDF, RDFS, Potege); Semantic Web, Linked Data, Big Data, Data Mining, Data Harvesting.