PANJAB UNIVERSITY, CHANDIGARH

(Estted. under the Panjab University Act VII of 1947- enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

POSTGRADUATE DIPLOMA IN LIBRARY AUTOMATION AND NETWORKING EXAMINATIONS, 2013

PANJAB UNIVERSITY, CHANDIGARH

Paper Code: LAN-01:

Paper Title: Basics of Computers and Communication

Instructions for the Paper-Setters / Examiners:

The Paper carries 80 marks. Duration of the paper is 3 h

Paper Code: LAN-02

Paper Title: Library Automation

Instructions for the Paper-Setters / Examiners:

The Paper carries 80 marks. Duration of the paper is 3 hours. There should be 9 questions in all, out of which the candidate be asked to attempt 5 questions, selecting one question from each unit. The first question shall be short answer type, containing 15 short questions spread over the whole syllabus, to be answered in about 25-30 words each. The candidate is required to attempt any 10 short answer type questions. It shall carry 20 marks @ 2 marks for each short question and shall be compulsory question.

Unit-IV

Computerized Information Services

Reference Services: Definitions of reference services, components and functions, levels, need for reference services, types of reference services, reference question, Digital reference services: advantages, models, forms. **Document Delivery Services:** Document delivery system, electronic document delivery service, software for EDD, methods of EDD, advantages and disadvantages of EDD. **Bibliographic Services:** Types of bibliography, bibliographic database, and database search interfaces, bibliographic databases on the www. **Alerting Services:** Current Awareness Services, Selective Dissemination of Information.

Essential Readings

Duval, B.K. And Main, L. (1992) Automated Library Systems: A Librarian's Guide and Teaching Manual. London: Meckler.

Kimber, R.T. (1970) Automation in Libraries. Oxford: Pergamon Press.

Kumar, P.S.G. (1987). Computerization of India Libraries. Delhi: B.R. Publishing House.

Pitkin, G.M. (ed.) (1991). The Evolution of Library Automation: Management Issues and Future Perspectives. London: Meckler.

Riaz, Muhammad (1995). Library Automation. New Delhi: Atlantaic.

Roce, James (19984) Introduction to Library Automation. Littleton: Libraries Unlimited.

Rowley, J.E. (1980) Computers for Libraries . 2nd ed. London: The Library Association.

Sharma Pandey, S.K. (1995).Fundamentals of Library Automation. New Delhi: Ess Ess Publications.

Further Readings

Bierman, K.J. (1974). Library Automation. In: Annual Review of Information Science and Technology. Vol.9Washington: American Society for Information Science.

Saffady, William (1989) Library Automation_ An Overview. Library Trends. 37(3), 269-81.

Salemon, Stephen. Library Automation. In: Encyclopedia of Library and Information Science. Vol 14New York: Marcel Dekker.

Vashishth, C.P. (ed.) (1988). Modernasitation: in Indian Libraries. Delhi: Indian Library Association.

Paper Code: LAN-03

Paper Title: Information Systems

Instructions for the Paper-Setters / Examiners:

The Paper carries 80 marks. Duration of the paper is 3 hours. There should be 9 questions in all, out of which the candidate be asked to attempt 5 questions, selecting one question from each unit. The first question shall be short answer type, containing 15 short questions spread over the whole syllabus, to be answered in about 25-30 words each. The candidate is required to attempt any 10 short answer type questions. It shall carry 20 marks @ 2 marks for each short question and shall be compulsory question. Rest of the paper shall contain 4 units. Each unit shall have 2 questions and the candidates shall be given internal choice i.e. the candidate shall attempt one question from each unit. The questions should be evenly distributed within the units. In no case a question should be asked from outside the syllabus. The question paper should be strictly according to the instructions mentioned above.

Objectives:

To provide basic knowledge of information storage, processing and retrieval.

Unit-1

System Analysis and Design

General Systems Theory: History and developments in general systems theory, system's approach, Information systems: components and types, Information systems in libraries. **Information System Design and Development:** System analysis, system design, system development methodology, systems development life cycle (SDLC), system implementation, evaluation and documentation, system description techniques.

Unit-II

Type of Information Systems

Information Retrieval Systems: Information retrieval architectures, categories of information retrieval systems, purpose, components, functions and models of information retrieval systems, evaluation of Information retrieval system. **Knowledge Based Retrieval Systems:** Expert system; need, components or structure, operation of expert system, construction of expert system. **Management Information Systems and Decision Support Systems:** Concept and definition of MIS, need, structures, design and development of MIS ,implementation, evaluation and maintenance of MIS, MIS and library and information centers; DSS: concept and definition, structure of DSS. **Database Management Systems:** Definition and concept, DBMS languages, history and need of DBMS, DBMS components, development, trends, advantages and disadvantages, data models.

Unit-III

Data Models and Database Design

Data Structures and File Organization: Concept, types of data structures; file organization techniques, models for logical data organization **Data Models:** Data modeling process, types of data models **Database Systems and Architecture**: Three-schema architecture

Unit-IV

Query Language and Query Processing

Query Language: Structured query language, features of SQL, SQL commands. **Boolean Logic**: Search strategy, developing effective search strategy, Boolean search. **Structured Query Formulation**: Query optimization, cost based optimizers.

Essential Readings

Christopher D. Manning, Prabhakar Raghavan and Hinrich Schütze, (2008) *Intro u t·on to In or at·on tr· va* , Cambridge University Press.

Doyle, L.B. (1975) **Information Retrieval** and Processing, Melville, Los Angeles.

Foskett, A.C.. (1996) The **subject** approach to information 5th ed., by London: Library Association Publishing.

Hicks, James O. **(1993). Management Information Systems**: A User Perspective. Minneapolis: west

Holsapple, C.W., and A. B. Whinston. (1996). Decision Support Systems: A Knowledge-Based Approach. St. Paul: West Publishing.

Lucas, **Henry C.** (1985). The **analysis**, **design**, and implementation of information systems. New York: McGraw-Hill.

McLeod, Raymond and Schell George (2000). **Management Information Systems** (8th Edition) NJ: Prentice Hall.

Waterman, D.A (1996) A Guide To **Expert Systems** Addison-Wesley Publishing Company.

Further Readings

Davis Gordon B, ed. (1999). The Blackwell Encyclopedic Dictionary of Management Information Systems. Oxford: Blackwell.

Deanna B. Marcum Digital Libraries: For Whom? For What? The , men5( )·

Paper Code: LAN-04

Paper Title : Networking and Internet Technology

Instructions for the Paper-Setters / Examiners:

The Paper carries 80 marks. Duration of the paper is 3 hours. There should be 9 questions in all, out of which the candidate be asked to attempt 5 questions, selecting one question from each unit. The first question shall be short answer type, containing 15 short questions spread over the whole syllabus, to be answered in about 25-30 words each. The candidate is required to attempt any 10 short answer type questions. It shall carry 20 marks @ 2 marks for each short question and shall be compulsory question.

Unit-IV

Web 2.0: Web 2.0 technologies and services; RSS, podcasts and vodcasts, blogs, wikis, social networks.

Web 3.0: Components of Web 3.0

Essential Readings

Andrew S. Tanenbaum(2002). *Co put r twor s* New Delhi: Prentice hall.

Black, U. (1992). *C /I an at roto o s* New York: Mc.Graw Hill.

Dawson, A. (1997). *Int rn t or ' rar an In or at'on ro ss'ona s* London: Library Association

Gilbert Held (1998). *Data Co un' at'ons twor 'n D v' s* New Delhi: Wiley

Mehta, Subhash. (1996). *n rstan 'n an s'n Int rn t* New Delhi, Ess Ess Publications.

Miller, M.A. (1991) *Int rn twor 'n A Gu' to twor Co un' at'ons A to A A to A* New York: M&T Books.

Prasad, K N. (1998) *Int tua prop rt r' ts 'n 'n or at'on s st s n twor s an s rv' s 'n In 'a* Chennai: Ranganathan Center for Information Studies.

Radia Perlman (1999). *Int r onn t'ons Br' s out rs w't s an Int rn twor 'n roto o s* Addison Wesley.

Raina, Roshan. (1997) *' rar r sour s ar'n an n twor 'n An approa a on ana nt s oo s o In 'a* Vikas Publishing House.

Randall, Neil. *a ours t Int rn t 'n a* New Delhi: Prentice-hall of India.

Sophon, D. L.

Unit-II

Types of Resources (by Subject)

Internet Resources: Science and technology .Internet Resources: Social Science and Humanities. Evaluation of Internet Resources.

1. intute (www.intute.ac.uk)
2. INFOMINE (www.infomine.ucr.edu)
3. ipl2 (ipl.org)
4. The Gateway (the gateway.org)
5. PINAKEZ (www.hw.ac.uk/libwww/irn/pinakes.html)
6. BUBL Link (bubl.ac.uk)
7.Worldwide Science.org
8. SSRN

Rosenberr

Objectives:

To develop computer skills and professional competencies to solve problems of libraries and information centers through practical knowledge of computers.

Unit-1

MS Windows, Ms – Office and Pc Security, tools and Services.