



C. U. SHAH UNIVERSITY

FACULTY OF :-Library and Information Sciences

DEPARTMENT OF :Library and Information Science

BLISc SEMESTER : 2 CODE : LIB 107

NAME : **Management of Library & Information Centers - I**

Teaching & Evaluation Scheme:-

Teaching Scheme				Evaluation Scheme			
Th	Tu	P	Total	External	Practical/ Seminar	Internal	Total
3	1	-	4	70	-	30	100

Objectives: -

1. To become aware of basic management principles
2. To develop skills of administration and management of library resources
3. Identify and describe key policy and planning factors and challenges in library management
4. Built up decision making ability
5. Get acquaintance of library standards

Pre requisite : Knowledge of English Language

Course outline:-

Unit	Course Contents	Number of Hours
1	Introduction to management: * General principles of Scientific Management * Library as a System * Organizational Structure of different types of library * Open access	[12]
2	Housekeeping Operations:	[18]



	<ul style="list-style-type: none">* Book / Information Resource selection and acquisition section, License negotiation and relevant rights issues.* Technical processing section* Serial control and circulation control* Policy, procedures and methods of maintenance and stock verification* Collection evaluation and weeding out	
3	Collection Management and Preservation: <ul style="list-style-type: none">* Policy and procedures for print and non-print resources including print and e-journals* Selection criteria and tools* Barriers of acquisition including licensing of electronic resources* Library security	[12]
4	Library Building / Space: <ul style="list-style-type: none">* Building and space management of library and information centers* Safety issues* Equipments and furniture- in addition for differently abled people* Library standards - Indian and International	[12]

Learning outcomes:

- 1) To make filmer with different management concepts and issues.
- 2) To know about key policy and planning factors and challenges in library management

Teaching and learning methodology:

Board teaching, Class interaction, group discussion, Multimedia tools, through Power Point Presentation Presentation, LCD projector, via seminar and assignments, quiz contest etc...

Recommended Books/ study resources:

1. Cowley, John. **Personnel Management in Libraries**, London, Clive Bingley, 1982.
2. Evans, G.E. **Management Techniques for Libraries**, New York, Academic press, 1983.
3. Koontz, H. et. al. **Management**, 15th ed. Tokyo McGraw Hill International Japan.
4. Jones, N and Jordan, P. **Steps Management in Library and Information work**, Aldershol, Gomer, 1982.
5. Laneaster, F.W. **Guidelines for evaluation of Information System and Services**, Paris: UESCO, 1998.
6. Mittal, R.L. **Library Administration, Theory and Practice**, New Delhi, Ess Ess, 2007
7. Ranganathan, S.R. **Library Administration** 2nd Ed., Bombay, Asia Publishing, 1959.
8. Rizzo, T.R. **Management for Libraries: Fundamental Issues**, 1980.



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9. Narayana, G.J. **Library and Information Management**, New Delhi, Prentice Hall, 1991.
10. Seetharama, S. **Guidelines for Planning of Libraries and Information Centres**, IASLIC, 1990.
11. Singh, M. **Library and Information, Management Theory and Practice**, Delhi, IBT, 1983.
12. Singh, R.S.P. **Fundamentals of Library Administration and Management Delhi**, Prabhat, 1990.
13. Umapathy, K.S. **Problems in Library Management**, 2nd Ed. New Delhi, Vikas

Recommended Books in Gujarati medium

1. BARODIA (NAVIN) : **Pustak Pasandgi**, Gujarat Pustakalaya Mandal.
2. BAROT (C P) : **Rang Nathi Vyavastha (Granthalaya Vyavastha)**, Gujarat Pustakalaya Mandal, 1965.
3. BHAYA (C M) : **Granthalaya Vyavastha and Sanchalan**, Gurjar Granth, 1989.
4. CHARAN (Shiv) : **Granthalaya Sanchalan**, Parshva Prakashan, 1987.
5. CHARAN (Shivdan) : **Pustakalaya Kshetra Panch Sutronu Pradan**, Granthalaya Vidhyabhavan, Sardar Patel University, 1991.



C. U. SHAH UNIVERSITY

FACULTY OF :-Library and Information Sciences

DEPARTMENT OF :Library and Information Science

BLISc SEMESTER :2 CODE : LIB 108

NAME : **Management of Library and Information Centers - II**

Teaching & Evaluation Scheme:-

Teaching Scheme				Evaluation Scheme			
Th	Tu	P	Total	External	Practical/ Seminar	Internal	Total
3	1	-	4	70	-	30	100

Objectives: -

1. To introduce variety of leadership and managerial pitfalls.
2. To develop skills to perform library operations and to evaluate library and information center’s performance.
3. Use of management techniques to achieve the organizational effectiveness and efficiency

Pre requisite : Knowledge of English Language

Course outline:-

Unit	Course Contents	Number of Hours
1	<p>Management</p> <ul style="list-style-type: none"> * Application of Scientific Management principles to Library and Information Centers * Management School of Thoughts – Global Theory of management, Approaches of Management * Management by Objectives 	[14]
2	<p>Personnel Management</p> <ul style="list-style-type: none"> * Staffing recruitments – selection – development and manpower planning * Management Inventory Chart, System approach to staffing, System 	[12]



	approach to selection, Selection Process: Techniques and instruments * Job designing / Job analysis, Job description, Job evaluation, Performance appraisal * Inter – personnelrelations: training and development	
3	Total Quality Management * Concept, Definition, Elements of TQM * Tools and techniques for improving quality * Quality Audit, LIS related Standards * Resource mobilization, Outsourcing, Library Consortia, Open Access * Technology Management and Evaluation of IT, Job descriptions of IT manager * Technology Assessment –Equipment, Infrastructure, Service, Staff and Self * Technology development –updatation	[14]
4	Financial Management and Reporting * Sources of Library Finance in different types of libraries * Budget techniques and method, budgetary control * Costing library process, functions and services * Cost effectiveness and Cost benefit analysis * Various types of report generation, Annual report – its components * Report writing and Library Statistics	[14]

Learning outcomes:

- 1) To expand skills to perform library operations and to evaluate library and information center's performance.
- 2) To learn about Financial Management, Budget techniques and method, budgetary control, Various types of report generation, Annual report – its components

Teaching and learning methodology:



Board teaching, Class interaction, group discussion, Multimedia tools, through Power Point Presentation, LCD projector, via seminar and assignments, quiz contest etc...

Recommended Books/ Study resources:

1. Al-Abdul-Gadar, Abdullah H. **Managing computer based information systems in developing countries: A cultural perspective**. Hershey PA, 1999
2. Krishan Kumar. **Library administration and management**. New Delhi: Vikas, 1993
3. Clare, Jenkins. **Collection Management in academic libraries**. Bombay: Jaico publishing House, 1996
4. Mahapatra, M. (Ed.) **Information Management in academic and research libraries**. Ahmedabad: INFLIBNET center, 1998
5. Thomas, Landau. **Library Furniture and Equipment**. London: (S.N.), 1963
6. Anand, Ballabh. **Modern Scientific Management of libraries**. Delhi: Rajat Publication, 2000
7. Ansari, M. M. **Text book of library Management**. New Delhi: Shree pud & Dist, 2003
8. Gorman, Christine. **Staff development in libraries**. New Delhi: Dominant Publishers, 2003
9. Jordan, Pater. **Staff management in library and information work**. Bombay: Jaico Publishing House, 1996
10. Jugal Kishore. **Personnel management in libraries**. New Delhi: Ess Ess Publication, 1981
11. Ranganathan, S.R. **Library manual**. Delhi: Indian Library Association, 1951
12. Ranganathan, S. R. **Library administration**. 2nd Ed. Bangalore. Sarada Ranganthan Endowment for Library Science, 1989.
13. Sharma, H. D. **Library building and furniture: a handbook for librarians**. Varanasi. Indian Bibliographic Centre, 1996.



C. U. SHAH UNIVERSITY

FACULTY OF :-Library and Information Sciences

DEPARTMENT OF :Library and Information Science

BLISc SEMESTER : 2 CODE : LIB 109

NAME : **Reference and Information Sources and Services: Theory**

Teaching & Evaluation Scheme:-

Teaching Scheme				Evaluation Scheme			
Th	Tu	P	Total	External	Practical/ Seminar	Internal	Total
3	1	-	4	70	-	30	100

Objectives: -

1. To familiarize with a broad range of information resources.
2. To develop evaluative and practical skills in handling with information resources.
3. Students will enable to examine a realistic information problem.

Pre requisite : Knowledge of English Language

Course outline:-

Sr. No.	Course Contents	Number of Hours
1	Fundamental Sources of Information * Categories of Information Sources : Primary, Secondary and Tertiary * Study of Reference Sources: Dictionaries, Encyclopedias, Almanacs, Year Books, Directories, Handbooks, Manuals, Bibliographies, Educational and Geographical, Reference Sources, Information Service * Definition and Need	[12]



	<p>* Documentation Services: Abstracting, Indexing, Translation, Reprography, Alerting Services- CAS and SDI</p> <p>* Document Delivery Service</p>	
2	<p>Information Sources and their evaluation</p> <p>* Evaluation of different types of Information sources</p> <p>* Electronic Information Sources : E-documents and databases</p> <p>Abstracting Service</p> <p>* Abstract: Meaning, Types : Indicative and Informative. Parts of an Abstract.</p> <p>* Abstracting Products: LISA, CAS, INSPEC</p>	[16]
3	<p>Information Service, Abstracting Service, Indexing Systems</p> <p>* Definition, Need, Scope</p> <p>* Types of information service: Ready Reference, Long Range Reference, Referral</p> <p>* Information Services in different types of Libraries</p> <p>Indexing Systems</p> <p>* Definition and Need</p> <p>* Pre-coordinate and Post coordinate- POPSI, PRECIS, KWIC, KWAC, KWOC and UNITERM</p>	[16]
4	<p>Web resources, Information Systems and their Services.</p> <p>* Gateways, Digital libraries, forum, etc</p> <p>Information Systems and their Services.</p> <p>* Study of National and International Information Systems: Their Information Services and Products.</p> <p>* National Information Systems : NISCAIR, ICSSR</p> <p>* International Information Systems : MEDLARS, AGRIS</p>	[10]

Learning outcomes:

- 1) To make acquainted with a broad range of information resources.
- 2) To learn how to provides different library services



- 3) To make aware traditional and electronic library services.

Teaching and learning methodology:

Board teaching, Class interaction, group discussion, Multimedia tools, through Power Point Presentation,, LCD projector, via

seminar and assignments, quiz contest etc...

Recommended Books/Study resources

1. Anjad Ali. **Reference Service and the digital sources of information**. 2004
2. Cheney, F. N. and Williams, W. J. **Fundamental reference sources**. Ed. 3, Chicago, ALA, 2000
3. Choudhary, G. G. and Choudhary, S. **Searching CD-ROM and online information sources**, 2001
4. Fourie, D. and Dowell, D. **Libraries in the information age**. New York, **Libraries unlimited**, 2002
5. Katz, William A. **Introduction to reference work: reference service and reference process**. V.2 Ed.5. New York, McGraw-Hill, 1987
6. Sewa Singh. **Handbook of International sources on reference and information**, 2001
7. Sewa Singh. **Manual of reference and information sources**, 2004
8. Sherman, C. and Price, G. **The invisible web: uncovering Information Sources Search engines can't see**. 2001
9. Stebbins, L.F. **Student guide to research in the digital age: how to locate and evaluate information sources**. 2006
10. Walford, A. J. **Guide to reference books**. V.3. Ed.4. London, Library Association, 1980

Recommended Books in Gujarati medium

1. PATEL (CHAMPAKLAL) : **Mahiti Vigyan**, Gujarat Granthalaya Seva Sangh, Ahmedabad.
2. THAKER (URMILA) : **Sandarbh Grantho**, Parshva Prakashan, Ahmedabad.



C. U. SHAH UNIVERSITY

FACULTY OF :-_Library and Information Sciences

DEPARTMENT OF :Library and Information Science

BLISc SEMESTER :2 CODE : LIB 110

NAME : **Library Management Software: Theory & Practical**

Teaching & Evaluation Scheme:-

Teaching Scheme				Evaluation Scheme			
Th	Tu	P	Total	External	Practical/ Seminar	Internal	Total
3	-	1	4	70	-	30	100

Objectives: -

1. To provide information regarding the importance of concepts Information Technology in society
2. To develop required Information Technology handling skills as well as h/w and s/w handling skills
3. To be aware about need and importance of Library Automation and Open Source S/W

Pre requisite : Knowledge of English Language

Course outline:-

Unit	Course Contents	Number of Hours
1	ICT Application in Library * Need and importance of IT in Library & Information Services * Planning of IT in Libraries: Manpower, Budgeting etc. * Implementation of IT in Library * Training of Staff and user	[05]
2	Library Automation * Planning for Library Automation * Development of Library Automation Software –its Function and requirements * Selection Criteria for Hardware and Software	[15]



	<ul style="list-style-type: none">* Retrospective Conversion Techniques* Advanced Technology in Automation: Bar coding, RFID, Biometric etc	
3	<p>Proprietary Library Management Software(LMS) & Open Source LMS</p> <ul style="list-style-type: none">* Major Proprietary LMS (SOUL, LIBSYS, ALICE etc.)* Major Open Source LMS (Koha, NewGenLib, Evergreen etc.)* Systems Requirements - Function and Features* Evaluation of Library Automation Software* Trends and future development of Library Automation Software	[15]
4	<p>Hardware and Software Management</p> <ul style="list-style-type: none">* Managing the servers* Backups & Security* RAID application* Software licensing* AMC issues	[10]
5	<p>Practical exposure on any one Proprietary LMS</p>	[18]
6	<p>Practical exposure on any one Open Source LMS</p>	[12]

Learning outcomes:

- 1) To know about different library automation software.
- 2) . To be aware about need and importance of Library Automation and Open Source S/W
- 3) To study about uses of hardware and software required in library management software.

Teaching and learning methodology:

Board teaching, Class interaction, group discussion, Multimedia tools, through Power Point Presentation LCD projector, via seminar and assignments, computer laboratory etc...

Recommended Books/Study resources



1. Cochrine, Peter. IT: **A glimpse of the future**. *ASLIB Proceedings*, 47(10), 1995
2. CALIBER-97. **Information Technology Applications in Academic Libraries**. Edited by A.L. Moorthy and P.B.Mangla. 4th National Convention for automation of Libraries in Education and Research, Held at Patiala during 6-8th March, 1997. Ahmedabad, INFLIBNET Centre, 1997
3. **DESIDOC Bulletin of Information Technology**, 15(2&3)1995. Ravichandrarao, I.K. Library Automation. Y.V.Estem, New Delhi, 1993
4. Haravu, L.J. **Strategies for the adoption of new information technology in Indian Libraries**. Paper presented in **CALIBER-95** Organised jointly by INFLIBNET Programme and University of Hyderabad at Hyderabad, 10-12 Feb. 1995
5. Jain, V.K. **Computer fundamentals**. New Delhi, BPB, 1993
6. Lakshmanamoorthy, A. and Rajendra V. **Information Technology for Libraries and Information Centers**. *AGLIS Journal*, 8(1-4), 1990.
7. Lancaster, F.W. **Toward paperless information system**. New York, Academic Press, 1978
8. Sullivan, M. **Detour the truth about the information superhighway**. Delhi, Pustak Mahal, 1995

E-resources

http://autolib-india.net/AutoLib_New.ppt

<http://koha.org/>

<http://library.iimcal.ac.in>

<http://www.ala.org/ala/professionalresources/libfactsheets/alalibraryfactsheet21.cfm>

<http://www.alatechsource.org/>

<http://www.goalexandria.com/solutions/index.html>

<http://www.igidr.ac.in/lib/paper1.htm>

<http://www.librarysoft.com/companyF/home.htm>

<http://www.librarysoftware.in/>

<http://www.librarytechnology.org/>

http://www.libsuite.com/library_auto.htm

<http://www.open-ils.org/> (Evergreen)

<http://www.slimpp.com/slim21site/default.htm>



C. U. SHAH UNIVERSITY

FACULTY OF :-Library and Information Sciences

DEPARTMENT OF :Library and Information Science

BLISc SEMESTER : 2 CODE : LIB 111

NAME : **Reference and Information Sources and Services - Practical**

Teaching & Evaluation Scheme:-

Teaching Scheme				Evaluation Scheme			
Th	Tu	P	Total	External	Practical/ Seminar	Internal	Total
-	-	4	4	-	70	30	100

Objectives: -

1. Students will enable to examine a realistic information problem in practice
2. Get acquainted with variety of information services by involving themselves
3. To impart skills to carry out information searches using variety of bibliographic and non bibliographic database
4. Interprets the information needs of users and able to translate into a coherent search strategy
5. To enhance the real-worked virtual Reference Service experience
6. To get practical experience of handling and searching from different reference tools
7. To impart skills to carry out information searches using a variety of bibliographic and non bibliographic database

Pre requisite : Knowledge of English Language

Course outline:-

Unit	Course Contents	Number of Hours
1	<p>Study and evaluation of Information Sources, and Reference queries including Traditional Reference Sources</p> <p>* Dictionary, Encyclopedia, Year Books, Almanac, Bibliographic Sources, Geographical Sources, Statistical Sources, Hand Books, Manuals (Evaluation of sources, Scope of the source, variety of sources, search strategy, compilation of Queries)</p> <p>* Online Databases: Commercial Publishers and Aggregators –</p>	[48]



	<p>scholarly, socially publication, Open access publisher.</p> <p>* Online Sources: ABI/Inform, Ebsco, JStore, Google, Proquest, Government Information, Health Science, Business Information</p>	
2	<p>Compilation of Bibliography and News Paper Clippings</p> <p>SOURCES OF INFORMATION</p> <p>Dictionary</p> <p>Definition & Scope of Dictionary</p> <p>Types of Dictionary</p> <p>Use of Dictionary</p> <p>Evaluation of Dictionary</p> <p>Difference between Dictionary & Encyclopedia</p> <p>Sarth Jodnikosh</p> <p>Bhadvadgomandal</p> <p>Gujarati- English Dictionary Ed.By P.G.Deshpande</p> <p>Modern English - Gujarati Dictionary Ed.By P.G.Deshpande</p> <p>Oxford English Dictionary</p> <p>The New Palgrave Economic Dict Ed. By John Eatwell</p> <p>Roget's International Thesaurus</p> <p>Bhartiya Vyavharkosh (16 Languages Kosh)</p> <p>Gujarati Digital Kosh</p> <p>Oxford Dictionary of quotations</p> <p>Encyclopedia</p> <p>Gujarati Vishvakosh</p> <p>New Encyclopedia Britannica</p> <p>Encyclopedia of Americana</p> <p>International Encyclopedia of Social Science</p> <p>Encyclopedia of Library And Information Science</p> <p>McGraw Hill Encyclopedia of Science & Technology</p>	[60]



Wikipedia

Yearbook & Almanac

India : A Reference Annual

Manorama Yearbook

Europa World Yearbook

Statesman's Yearbook

Whitker's Almanac

World Almanac & Book Of Facts

Information Please Almanac

Britannica Yearbook

Commonwealth University Yearbook

Directories, Handbook & Manual

Telephone Directory (Local)

University Handbook

Ulrich's International Periodical Directory

Europa World of Learning

Commonwealth University Yearbook

Times of India Directory & Yearbook

Parichay Pusticao

Social, Professional, Commercial Directories

Statistical Information Source

Census of India

India : Observer Statistical Handbook

United Nation Statistical Yearbook

Gujarat : 2004

Geographical Information Sources

Gazetteers, Maps, Atlas, Globe & Travel Guidebook

Gazetteer of Gujarat : Ahmedabad Dist.



<p>Gazetteer of India</p> <p>Columbia Lippincott Gazetteer of The World</p> <p>Webster's New Geographical Dictionary</p> <p>Chamber's World Gazetteer: An A-Z of Geographical Information</p> <p>An Atlas of India</p> <p>Gujarat Road Atlas/Map</p> <p>Ahmedabad City Map</p> <p>Naksha Ma Gujarat</p> <p>School Atlas</p> <p>The Times Atlas of The World</p> <p>Reader's Digest World Great Atlas</p> <p>National Geographic World Atlas</p> <p>Pravasbharti</p> <p>Fodor's India</p> <p>Railway Guide</p> <p>Biographical Information Sources</p> <p>Gujarati Sahityakar Parichay Kosh</p> <p>India's Who's Who</p> <p>International Who's Who</p> <p>Who's Who of Indian Writers</p> <p>Megrawhill Encyclopadia of World Biography</p> <p>Oxford Dictionary of National Biography</p> <p>Webster's New Biographical Dictionary</p> <p>Dictionary of National Biography (Ed. By S.P.Sen, Calcutta)</p> <p>Bibliographies</p> <p>INB (Indian National Bibliography)</p> <p>BNB (British National Bibliography)</p> <p>Cumulative Book Index</p>	
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Books In Print Indian Books In Print Ulrich's International Periodical Directory Indexing & Abstracting Journals Index India Science Citation Index Chemical Abstracts LISA - Library & Information Science Abstracts The New York Times Index Asian Recorder	
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Learning outcomes:

- 1) To make acquainted with a broad range of information resources.
- 2) To learn how to provides different library services
- 3) To make aware traditional and electronic library services.
- 4) . To get practical experience of handling and searching from different reference tools

Teaching and learning methodology:

Board teaching, Class interaction, group discussion, Multimedia tools, through Power Point Presentation, LCD projector, via seminar and assignments, quiz contest etc...

Note:

This is a practical paper. Reference books listed within the content will be used for study and teaching. Hence no other reference books are listed here.



C. U. SHAH UNIVERSITY

FACULTY OF :-Library and Information Sciences

DEPARTMENT OF :Library and Information Science

BLISc SEMESTER :2 CODE : **LIB 112**

NAME : **Fundamentals of Information Technology: Theory and Practical**

A – Theory

Teaching & Evaluation Scheme:-

Teaching Scheme				Evaluation Scheme			
Th	Tu	P	Total	External	Practical/ Seminar	Internal	Total
2	-	2	4	35	35	30	100

Objectives: -

1. To provide introduction to the concepts and techniques of Computing and other Information Technology
2. To develop basic Information Technology handling skills

Pre requisite : Knowledge of English Language

Course outline:-

Unit	Course Contents	Number of Hours
1	Introduction to Computer and its Hardware *Understanding IT and components of IT * Computers and Communication Technologies (Data Process Cycles and Operations) * Classification of computers – Analog and Digital * Generation of computers * Various types of Computers (PC, Workstation, Stand alone systems including Note Books and Servers)	[12]



	<ul style="list-style-type: none">* Block Diagram of Computer* Understanding Personal Computer: CPU, Storage and Input / Output Devices, RAM and ROM,USB, Hard Discs, Scanners and Digital Camera, Joysticks & Printers	
2	<p>Character Coding, Number System and Programming</p> <ul style="list-style-type: none">* Data presentation in Computers: Binary Number System, Overview of Character Coding Standards- ASCII and UNICODE*Programming Concepts, Algorithm and Flow Chart	[06]
3	<p>Computer Software</p> <ul style="list-style-type: none">*Operating Systems (DOS, Window, Unix/Linux, Mac etc.)* System and Application Softwares* Concept of Proprietary Software, Open Source Software, Freeware, Shareware	[06]
4	<p>Database Management</p> <ul style="list-style-type: none">* File Organization: Files and Databases, Data Elements, Fields, Records* DBMS and RDBM Packages* Basic features of Database Applications (MS Access and WINISIS)	[06]
5	<p>Practical</p> <ul style="list-style-type: none">* Computer Operating System – DOS v Computer Operating System – WINDOWS* MS-OFFICE / OPEN-OFFICE Applications (Word/Excel/PowerPoint etc.)* Database creation, search and retrieval with CDS/ISIS and WINISIS	[60]

Learning outcomes:

- 1)To develop basic Information Technology handling skills
- 2) Application and use of I.T in library and information centre .

Teaching and learning methodology:

Board teaching, Class interaction, group discussion, Multimedia tools, through Power Point Presentation, LCD projector, via seminar and assignments, computer laboratory etc...

Recommended Books/Study resources

1. Amba,and Raghavan, KS.CDS/ISIS **Primer**. New Delhi: Ess Ess.
2. Jain, V.K. **Information Technology and computer programming**.3rd ed. Delhi: S.K.Karatia and Sons,2000
3. Carter,Roger. **The Information technology handbook**. London: Heinemann,1987



4. Frye, Curtis. **Microsoft Access Version 2002**. Delhi: Prentice Hall, 2002.
5. Khurana, Rohit, ed. **Encyclopedia of computer Science**. New Delhi: Allied, 2002.
6. Pfaffenberger, Bryan. **Linux command instant references**. Delhi: BPB, 2002
7. Prem Singh and Khanna, JK. **Information technology in the Libraries**. Delhi: Pragati, 1994.
8. Rajasekhar, T.B. **Computer application to library and information activities (ILA/ NISSAT workshop on Computer Application to Library and Information Activities (Madras) (1987)**
9. Reddy, K. C. **Generations of computers (in University of Hyderabad, PGDLAN course material)**.
10. Rowley, Jennifer E. **The basics of information technology**. London: Bingley, 1988
11. Schidt, Herbert. **Windows NT 4 Programming forms the ground up**. Delhi: Tata-McGraw Hill, 1997
12. Sehgal, R.L. **Computer based information processing techniques for librarians**. 2V. Delhi: Ess Ess, 1998.
13. Shah, P.C. **Computers and I/O Devices. (ILA/NISSAT workshop on Computer Applications to Library and Information Activities (Workshop on-) (Ahmedabad) (1986) Course material**. Delhi: ILA, 1986.
14. Srishaila, Smitha. **Database and DBMS**. Univ. of Hyderabad, Center for distant Education. PGDLAN. Unit - 24 (Course Material)
15. Taxali, R.K. **PC software for Windows 98**. Delhi: Tata McGraw-Hill, 2001

Recommended Books in Gujarati medium

s!f .gOMD[XG 8[SGM,MHL v VT], S[P VSAZL

sZf .g8ZG[8 v XFC T[H;