ACADEMIC PLANNING

Name of Course : M.Sc.(CA & IT)-VIII	**Subject : 801– Networking-II**
Name of Teacher : J.B.Patel	**Year : 2014-15**

Month	Week	Teaching Plan	Remarks	Sign
JAN	**I**	Standards, Internet, History, OSI model, Protocol suite, Addressing, Transmission media, Local Area and Wide Area Networks, Switching, Connecting devices, IP addressing,		
		Subnetting, Supernetting, IPv6		
	II	Delivery and Forwarding of IP packets – Forwarding, Routing Table		
		Datagram, Fragmentation, Checksum, IP Design		
	III	ARP, RARP		
		Internet control message protocol		
	IV	Internet group management protocol		
		User Datagram protocol - UDP operation, Use, UDP design, TCP Services		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
FEB	**I**	Internal Evaluation (Test-1)		
		TCP Segment, TCP Connection		
	II	TCP State Transition Diagram, Windows In TCP		
		Flow Control, Error Control		
	III	Error Control, Congestion Control, Timers		
		Introduction to BOOTP and DHCP, Operations, packet format		
	IV	DHCP State transition Diagram		
		Need for DNS, Name Space, Distribution of Name space, Address resolution		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
MAR	**I**	DNS messages, TELNET, NVT		
		FTP, Connections, Communication, E-mail Architecture		
	II	SMTP, POP3, MIME, Web based Mail Architecture.		
		SNMP concept, Components, PDUs		
	III	Mobile IP Addressing, Agent, Phases, inefficiency in Mobile IP		
		Why TMN, ATM Networks-Broadband Network and Services , ATM Technology, Virtual Path, Virtual Circuit.		
	IV	ATM Packet Size - Role of SNMP and ILMI in ATM Management - ATM Digital Exchange Interface Management		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
APR	I			
	II			
	III	Internal Evaluations (Test-2)		
	IV			

ACADEMIC PLANNING

Name of Course : M.Sc.[CA & IT] - VIII	**Subject : 803-Adv. Algoritham**
Name of Teacher : Badal K Kothari	**Year : 2014-15**

Month	Week	Teaching Plan	Remarks	Sign
January	**I**	Practical – 1 (Single linked list and its operation)		
		Practical – 2 (Doubly Linked List and its operation)		
	II	Practical – 2 (Doubly Linked List and its operation)		
		Practical-3 (Binary Tree Traversal)		
	III	Practical-4 (D.F.S.)		
		Practical-4 (D.F.S.)		
	IV	Practical-5 (Iterative and Recursive Binary Search)		
		Practical-6 (Merge Sort)		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
February	**I**	Internal Practical Evalution-01		
		Practice Session		
	II	Practical-7 (Strassen's Matrix Multiplication)		
		Practical-7 (Strassen's Matrix Multiplication)		
	III	Practical-8 (optimal merge patterns)		
		Practice Session		
	IV	Practical-9 (Huffman coding)		
		Practical-9 (Huffman coding)		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
March	**I**	Practical-10 (Kruskal's algorithm)		
		Practical-10 (Kruskal's algorithm)		
	II	Practical-11 (shortest path algorithm)		
		Practice Session		
	III	Practical-12 (Floye-Warshal algorithm.)		
		Practical-12 (Floye-Warshal algorithm.)		
	IV	Practical-13 (Salesman Problem)		
		Practical-13 (Salesman Problem)		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
April	**I**	Assignment Submission		
		Assignment Submission		
	II	General Checking		
		General Checking		
	III	Internal Practical Evaluations-02		
	IV			

ACADEMIC PLANNING

Name of Course : M.Sc.(CA & IT)-VII	Subject : 803– Adavnced Algorithms
Name of Teacher : K.I.Chokhawala	Year : 2014-15

Month	Week	Teaching Plan	Remarks	Sign
Jan	I	Chap–I Introduction to Algorithms		
		Overview of Data structure		
	II	Chap–II Introduction to Linked list		
		Singly linked list		
	III	Doubly linked list		
		Sorted linked list		
	IV	Circular linked list		
		Chap–III Introduction to Tree		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
Feb	I	Internal Evaluation (Test-1)		
		Binary tree with operations		
	II	Chap-IV Introduction to Graph		
		DFS and BFS with Applications		
	III	Chap-V Introduction to Greedy Algorithms		
		Kruskal's Algorithm		
	IV	Prim's Algorithm		
		Elements of greedy strategies and Huffman codes and task scheduling problem		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
March	I	Chap-VI Introduction to divide and conquer		
		Merge sort and Quick sort		
	II	Strassen's Matrix Multiplications		
		Chap-VII Introduction to dynamic programming		
	III	Elements of dynamic programming and matrix chain multiplication		
		Chap-VIII Introduction to String matching		
	IV	Naïve string matching		
		Rabin-Karp and Knuth-Morris Pratt Algorithm		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
April	I	Chap-IX Introduction to NP-Complete Problem		
		Polynomial-time verification, NP-Completeness and Reducibility		
	II	Internal Evaluations (Test-2)		
		NP-Completeness proof and NP-Complete Problems		
	III	Group Discussion related to subject queries		
		Old Question Paper Solutions		
	IV			

ACADEMIC PLANNING

Name of Course : M. Sc.(CA&IT) Semester-VIII	**Subject : 804 Computer Security**
Name of Teacher : J. N. Modi	**Year : 2014-15**

Month	Week	Teaching Plan	Remarks	Sign
Jan	I	What Does "Secure" Mean? , Attacks, The Meaning of Computer Security		
		Computer Criminals, Methods of Defense		
	II	Making a Business Case, Quantifying Security, Modeling Cyber -security		
		Current Research and Future Directions		
	III	Intruders		
		• Intruders, Intruders detection, Password management.		
	IV	Malicious Software		
		• Viruses and Related Threats		
		Test-I		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
Feb	I	Firewalls • Firewalls Design principle, established systems .		
	II	Foundations of cryptography and computer security • Mathematical foundations, Randomness		
	III	Symmetric key cryptography • Classical Encryption Techniques • Block Ciphers and The Data Encryption Standard		
	IV	Advance Encryption Standard • Confidentiality Using Symmetric Encryption - Public key cryptography		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
March	I	Test-II		
		Public Key Cryptography And RSA		
	II	Protocols: Digital Signature standards		
		Electronics Mail Security -		
	III	MIME, data Compression technique		
		Web security: -Secure Socket Layer		
	IV	IP Security: Architecture, Authentication Leader,		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
April	I	Transport Layer security, secure electronics transactions		
		PGP (Pretty Good Privacy) MIME,		
	II	Encapsulating security Payload –Key management		
		Paper Solution		
	III	Assignment		
		Test-III		
	IV			
	V			

ACADEMIC PLANNING

Name of Course : M.Sc.[CA & IT] - VIII	**Subject : 804-Computer Security**
Name of Teacher : Viral V Vyas	**Year : 2014-15**

Month	Week	Teaching Plan	Remarks	Sign
January	**I**	Introduction to Encryption/Decryption Technique with practical example.		
		Introduction to menu driven program to implement [Mono-alphabetic Substitution Technique] Caesar Cipher Algorithm and also perform cryptanalytic Brute-Force Attack to print all translations of plaintext using all possible key values.		
	II	Assignment Practical-01 Mono-Alphabetic Substitution Cipher		
		Assignment Practical-02 Vigenere Cipher		
	III	Introduction to menu driven program to implement [Poly-alphabetic Substitution Technique] One-Time Pad Vigenere Cipher Algorithm.		
		Introduction to menu driven program to implement [Poly-alphabetic Substitution Technique] One-Time Pad Vigenere Cipher Algorithm.		
	IV	Assignment Practical-03 Autokey Vegenere Cipher		
		Practice Session		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
February	**I**	Internal Practical Evalution-01		
		Introduction to menu driven program to implement [Mono-alphabetic Substitution Technique] Playfair Cipher Algorithm.		
	II	Introduction to menu driven program to implement [Mono-alphabetic Substitution Technique] Playfair Cipher Algorithm.		
		Practice Session		
	III	Introduction to menu driven program to implement [Rotor Machine Technique] 3-Rotor Machines Cipher Encrypt algorithm.		
		Assignment Practical-04 Rail-Fence Transposition Cipher		
	IV	Introduction to menu driven program to implement S-DES block Cipher Encrypt algorithm Session-01		
		Introduction to menu driven program to implement S-DES block Cipher Encrypt algorithm Session-02		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
March	**I**	Introduction to menu driven program to implement S-DES block Cipher Encrypt algorithm Practice Session		
		Introduction to computer program that implements Columnar Transposition Cipher.		
	II	Introduction to computer program that implements fast exponentiation (successive squaring) modulo n.(Decryption)		
		Introduction to computer program that implements public key cryptography and RSA algorithm Session-01		
	III	Introduction to computer program that implements public key cryptography and RSA algorithm Session-02		
		Introduction to computer program that implements public key cryptography and RSA algorithm Practice Session.		
	IV	Introduction to computer program that implements Digital Signatures Algorithm.(Encryption)		
		Introduction to computer program that implements Digital Signatures Algorithm.(Decryption)		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
April	**I**	Introduction to computer program that implements cryptographic Hash function.(Encryption)		
		Introduction to computer program that implements cryptographic Hash function.(Decryption)		
	II	Project Submission		
		Project Submission		
	III	Internal Practical Evaluations-02		
	IV			

ACADEMIC PLANNING

Name of Course : M.Sc.(CA & IT)-VIII	**Subject : 803-XML and Web services**
Name of Teacher : R.D Prajapati	**Year : 2014-15**

Month	Week	Teaching Plan	Remarks	Sign
Jan	I	XML Introduction, XML Pros and Con ,DOM Introduction, DOM Document, DOM Nodes, and Types, XMLHTTPREQUEST object		
		DOM Node Tree, DOM Load Function, DOM Methods, DOM Accessing		
	II	DOM Document Type, DOM CData		
		DOM Node, Element, Attributes, Text Info, DOM Node List, DOM traversing		
	III	Manipulating Nodes		
		DOM get values, DOM Create Nodes, DOM Replace Nodes, DOM Remove Nodes, DOM Add Nodes, and DOM clone Nodes		
	IV	Introduction to DTD, Purpose of DTD,DTD Building Blocks, DTD Elements		
		DTD Attributes, DTD Elements Vs Attributes,		

Month	Week	Teaching Plan	Remarks	Sign
Feb	I	DTD Entities, DTD Validation **(1st Theory Test :3rd February)**		
		Introduction to XSLT,XLST Languages, XSLT Browsers, XSLT Transform XSLT <Template>		
	II	XSLT <value-of>, XSLT <for- each>, XSLT<sort>, XSLT <if>, XSLT <choose>		
		XSLT Apply, XSLT on the Client, XSLT on the server, XSLT Edit XML		
	III	Introduction to XPATH, XPATH nodes, XPATH syntax		
		XPATH Operators, XPATH Functions		
	IV	Introduction to XQUERY, XQUERY Flower, XQUERY HTML, XQUERY terms		
		XQUERY syntax, XQUERY Add, XQUERY select, XQUERY Function		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
March	I	Introduction to XLINK, XLINK syntax, XLINK Example, XLINK reference		
		Introduction to XPOINTER, XPOINTER syntax, XPOINTER Example		
	II	Introduction to XSD, XSD<schema>		
		simple types (XSD elements, XSD attributes)		
	III	Complex Types (XSD elements,		
		XSD elements only, XSD empty, XSD text only, XSD mixed, XSD indicators		
	IV	XSD <any>, XSD <any Attribute>		
		Data Types(XSD string, XSD date, XSD numeric, XSD misc)		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
April	I	Introduction to XSLFO		
		,XSLFO Documents, XSLFO Area		
	II	XSLFO flow, XSLFO pages, XSLFO block, XSLFO lists, XSLFO tables		
		Overview Of SOAP, SOAP: Protocol Message Structure		
	III	Web services Overview-Architecture, UDDI **(2nd Theory Test :14th April)**		
		Web service Description Language		
	IV			

ACADEMIC PLANNING

Name of Course : M.Sc.(CA & IT)-VIII	Subject : 805- XML & Web Services
Name of Teacher : Amit Patel	Year : 2014-15

Month	Week	Teaching Plan	Remarks	Sign
Jan	I	Create an XML file which contain all the information of M.Sc(CA & IT) / MCA's student.		
	II	Load XML document using XmlHttpRequest Object. Write a program to display root element, count child elements for root element and list child elements from XML document.		
	III	Write a program to display all information of student in well formatted form (like in table format). Write a program to display name of all the student with address .		
	IV	Write a program to add new semester to course M.Sc(CA & IT) with attribute No=3. Write a program to remove the subjects from semester.		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
Feb	I	Internal Evaluation (Test-1)		
	II	To list out name, address and date of birth of all students. To display subjects of M.Sc.(CA&IT)'s sem-1		
	III	List out student's name with their date of birth's year is greater than 2006, and data should be in sorting for of year To list out name, address and date of birth of all students		
	IV	To write code for name, semester, and subject details of all students		

ACADEMIC PLANNING

Month	Week	Teaching Plan	Remarks	Sign
March	I	To get the details of students		
	II	To get the student details whose name is ""Kashish"		
	III	To get the student details whose name contains "He"		
	IV	To group the semester for every student order by name		

April	I	To use the concept of witch statatemen		
	II	To use the concept of function		
		Internal Evaluation (Test-2)		