Lesson Plan

Name of the Faculty : Shakti Raj Singh, Lecturer in Computer Engg.
Discipline : Computer Engg.
Semester : 6th
Subject : Network Security
Lesson plan duration : 15 weeks (from March to June 2022), Theory-4hr, Practical-3hrs

Week	Theory		Practical	
	Lecture Day	Topic (including assignments /tests)	Practical Day	Topic
1st Week	1st	**Introduction:** Need for securing a network	1st	Installation and comparison of various anti virus software
	2nd	Principles of Security		
	3rd	Type of attacks	2nd	Installation and study of various parameters of firewall.
Week 2	1st	Introduction to cyber crime & cyber law-Indian Perspective (IT Act 2000 and amended 2008),	1st	Practice
	2nd	Cyber ethics & ethical hacking		
	3rd	What is hacking? Attacker, phreaker etc.	2nd	Practice of C language
Week 3	1st	Assignment on Cyber crime		
	2nd	**Securing Data over Internet:** Introduction to basic encryption and decryption	1st	Practice of C language
	3rd	Concept of symmetric and asymmetric key cryptography	2nd	Practice of C language
Week 4	1st	Assignment on cryptography		
	2nd	Test	1st	Writing program in C to Encrypt using XOR key.
	3rd	Overview of DES, RSA and PGP	2nd	Practice
Week 5	1st	Introduction to Hashing: MD5, SSL		
	2nd	Introduction to Hashing: MD5, SSL, SSH, HTTPS,	1st	Writing program in C to Decrypt using XOR key.
	3rd	Digital Signatures, Digital certification	2nd	Practice
Week 6	1st	Digital Signatures, Digital certification, IPSec		
	2nd	Assignment on Hashing	1st	Study of VPN.
	3rd	Test	2nd	Study of VPN./Hands On
Week 7	1st	**Virus, Worms and Trojans: Introduction & Definition**	1st	Study of VPN.
	2nd	preventive measures – access central		
	3rd	checksum verification & process configuration	2nd	Study of VPN./Hands On
Week 8	1st	Assignment on Virus, Worms and Trojans		
	2nd	Virus scanners & Heuristic scanners	1st	Hands On
	3rd	Application level virus scanners	2nd	Hands On
Week 9	1st	Deploying virus protection		
	2nd	Assignment & Test	1st	Study of various hacking tools.
	3rd	**Firewalls**: Definition and types of firewalls	2nd	Study of various hacking tools./Hands On
Week 10	1st	Firewall configuration		
	2nd	Limitations of firewall.	1st	Study of various hacking tools./ Hand On

	3rd	Assignment & Test	2nd	Study of various hacking tools./ Hands On
Week 11	1st	**Intrusion Detection System (IDS)** : Introduction & IDS limitations	1st	Hands On
	2nd	Teardrop attacks, counter measures; Host based IDS set up		
	3rd	**Handling Cyber Assets-** Configuration policy as per standards	2nd	Hands On
Week 12	1st	Disposable policy	1st	Practical applications of digital signature.
	2nd	**Virtual Private Network (VPN)** : Basics, setting of VPN,		
	3rd	VPN diagram & Configuration of required objects	2nd	Practical applications of digital signature./Hands On
Week 13	1st	Exchanging keys, modifying security policy	1st	Practice & Viva
	2nd	Assignment		
	3rd	Test	2nd	Practice & Viva
Week 14	1st	**Disaster and Recovery:** Disaster categories	1st	Domain Based Networking
	2nd	Network disasters – cabling, topology		
	3rd	Single point of failure, save configuration files	**2nd**	Hands On
Week 15	1st	Server disasters – UPS, RAID, Clustering	**1st**	Hands On
	2nd	Backups, server recovery		
	3rd	Assignment & Test		

Lesson Plan

Name of the Faculty : Yashvir Singh, Lecturer in Computer Engg.
Discipline : Computer Engg.
Semester : 6th
Subject : EDM
Lesson plan duration : 15 weeks (from March to June 2022) Theory-4hr

Week	Theory	
	Lecture Day	Topic (including assignments /tests)
1st Week	1st	Concept /Meaning and its need of Entrepreneurship
	2nd	Qualities and functions of entrepreneur
	3rd	Barriers in entrepreneurship
Week 2	1st	Sole proprietorship and partnership forms of business organisations
	2nd	Schemes of assistance by entrepreneurial support agencies at National, State, KVIB,
	3rd	District level: NSIC
Week 3	1st	District level: NRDC & DC:MSME
	2nd	District level: SIDBI & NABARD,
	3rd	District level: Commercial Banks, SFC's TCO, KVIB, &DIC
Week 4	1st	Technology Business Incubator (TBI) and Science and Technology Entrepreneur Parks (STEP).
	2nd	Assignment on Entrepreneurship
	3rd	Test
Week 5	1st	Market Survey and Opportunity Identification
	2nd	Scanning of business environment
	3rd	Salient features of National and State industrial policies and resultant business opportunities
Week 6	1st	Types and conduct of market survey
	2nd	Assessment of demand and supply in potential areas of growth
	3rd	Identifying business opportunity
Week 7	1st	Considerations in product selection
	2nd	Assignment on Market Survey
	3rd	Test
Week 8	1st	Project report Preparation
	2nd	Preliminary project report
	3rd	Detailed project report including technical & economic feasibility
Week 9	1st	Detailed project report including market feasibility
	2nd	Common errors in project report preparations
	3rd	Exercises on preparation of project report
Week 10	1st	Assignment on project report
	2nd	Test
	3rd	Introduction to Management: Definitions and importance of management
Week 11	1st	Functions of management: Importance and Process of planning, organising, staffing, directing and controlling
	2nd	Principles of management (Henri Fayol, F.W. Taylor) Concept and structure of an organisation Types of industrial organisations : a) Line organisation b) Line and staff organisation c) Functional Organisation
	3rd	Test
Week 12	1st	Leadership Definition and Need Qualities and functions of a leader Manager Vs leader Types of leadership
	2nd	Motivation : Definitions and characteristics Factors affecting motivation Theories of motivation (Maslow, Herzberg, McGregor)
	3rd	Assignment on Leadership & Motivation
Week 13	1st	Test
	2nd	**Management Scope in Different Areas :** Human Resource Management Introduction and objective Introduction to Man power planning, recruitment and selection Introduction to performance appraisal methods
	3rd	**Material and Store Management** Introduction functions, and objectives ABC Analysis and EOQ
Week 14	1st	**Marketing and sales** Introduction, importance, and its functions Physical distribution Introduction to promotion mix

		Sales promotion
	2nd	**Financial Management** Introductions, importance and its functions Elementary knowledge of income tax, sales tax, excise duty, custom duty and VAT
	3rd	Assignment on Management Scope in Different Areas
Week 15	1st	**Miscellaneous Topics :** **Customer Relation Management (CRM)** & Definition and need Types of CRM
	2nd	**Total Quality Management (TQM)** Statistical process control Total employees Involvement Just in time (JIT)
	3rd	**Intellectual Property Right (IPR)**: Introductions, definition and its importance Infringement related to patents, copy right, trade mark

Lesson Plan

Name of the Faculty : Rekha Jangir, Lecturer in Computer Engg.
Discipline : Computer Engg.
Semester : 6th
Subject : Project
Lesson plan duration : 15 weeks (from march to June 2022)

Week	**Practical**	
	Practical Day	Topic
1st Week	1st	Selection of Project
	2nd	Selection of Project
Week 2	1st	Finalization of Project
	2nd	Finalization of Project
Week 3	1st	Outline of Project
	2nd	Outline of Project
Week 4	1st	Planning of Project
	2nd	Planning of Project
Week 5	1st	Execution of Project
	2nd	Execution of Project
Week 6	1st	Execution of Project
	2nd	Execution of Project
Week 7	1st	Execution of Project
	2nd	Execution of Project
Week 8	1st	Execution of Project
	2nd	Execution of Project
Week 9	1st -G	Execution of Project
	2nd	Execution of Project
Week 10	1st	Providing Solution of Problems
	2nd	Providing Solution of Problems
Week 11	1st	Production of Final Executed project
	2nd	Production of Final Executed project
Week 12	1st	Checking of Final Project
	2nd	Checking of Final Project
Week 13		

	1st	Report writing
	2nd	Report writing
Week 14	1st	Seminar
	2nd	Seminar
Week 15	1st	Viva-Voce
	2nd	Viva-Voce

Lesson Plan

Name of Faculty : Reenu Discipline : Computer Engg.
Semester : 6th
Subject : **MOBILE APPLICATION DEVELOPMENT**
Lesson Plan Duration : 15 Weeks (From 15 March 2022 to 30 June 2022)

Week	Theory		Practical	
	Lecture Day	**Topic (including assignment/test)**	**Practical Day**	**Topic**
1st	1	Introduction : Evolution of Mobile Computing, Important terminologies, Mobile computing functions	1	Write a program to demonstrate activity (Application Life Cycle)
	2	Mobile computing security issues, Mobile computing Devices		
	3	Networks: Wired , Wireless , Adhoc, Comparison of wired and wireless mechanism		
	4	Various types of wireless communication technologies used in Mobiles, Antennas , Basics of Base Station and Medium access control and Mobile station.		
2nd	5	Architecture : Architecture of Mobile Computing, 3- Tier Architecture, Presentation (Tier-1), Application (Tier -2), Data (Tier – 3)	2	Write a program to demonstrate different types of layouts
	6	Mobile computing through Telephony: Evolution through telephony		
	7	Wireless LAN: Introduction-Applications of WLAN, Infrared versus Radio Transmission		
	8	Features of WI-FI and WI-MAX, Bluetooth :Introduction and application		
3rd	9	Global System for Mobile Communication (GSM): Introduction	3	Write a program to implement simple calculator using text view, edit view, option button and button
	10	GSM Architecture, GSM Entities (Basics only), Introduction to CDMA		
	11	Comparison of FDMA, CDMA andIDMA.		
	12	Short Message Service (SMS): Mobile computing over SMS, Short Message Service,		
4th	13	Strength of SMS, SMS Architecture	4	1. Write a program to demonstrate list view 2. Write a program to demonstrate photo gallery
	14	Value added services through SMS, VAS Examples		
	15	General Packet Radio Service (GPRS): Introduction,		
	16	, GPRS Packet data Network, Applications for GPRS, Generic Applications,		
5th	17	GPRS Specific Applications, Limitations of GPRS, Features of 3G and 4G Data Service	5	Write a program to demonstrate Date picker and time picker
	18	Mobile Operating Systems : Evaluation of Mobile Operating System-Handset Manufactures		
	19	and their Mobile OS- Mobile OS and their features		
	20	Linux Kernel based Mobile Or		

6th	21	ANDROID : Android Versions, Features of Android,	6	Develop an simple application with context menu and option menu
	22	Architecture of Android		
	23	Android Market, Android Runtime (Dalvik Virtual Machine)		
	24	ANDROID SDK & ADT : Android SDK,		
7th	25	Android Development Tool (ADT)	7	Develop an application to send SMS
	26	Installing and configuring Android, Android Virtual Device (AVD)		
	27	ACTIVITIES & INTENTS : Understanding Activites		
	28	activities and indents		
8th	29	Calling built-in applications using intents, Fragments Displaying Notifications	8	Write a program to view, edit contact
	30	User Interface : Views and Viewgroups		
	31	Display Orientation , Action Bar,		
	32	Listening for UI Notifications		
9th	33	Basic Views : Textview, Button, Image Button, EditText, CheckBox,	9	Write a program to send e-mail
	34	ToggleButton, RadioButton and RadioGroup Views,		
	35	ProgressBar View, Auto Complete Text View		
	36	Advanced Views : Time Picker View and Date Picker View,		
10th	37	, List Views, Image View, Menus	10	Write a program to demonstrate a service
	38	Analog and Digital View, Dialog Boxes		
	39	Displaying Pictures & Menus with Views: Image View, Gallery View,		
	40	ImageSwitcher, GridView - Creating the Helper Methods		
11th	41	Options Menu, Context Menu	11	Write a program to demonstrate web view to display web site
	42	SMS, Phone: Sending SMS		
	43	Receiving SMS,		
	44	Making phone call		
12th	45	Location Based Services : Obtaining the Maps API Key- Displaying the Map, Zoom Control , Navigating to a specific location	12	Write a program to display map of given location/position using map view
	46	Adding Marker , Geo Coding and reverse Geo coding		
	47	Location Based Service and SQLite		
	48	Location Based Services : Obtaining the Maps API Key, Displaying the Map, Zoom Control,		
13th	49	Navigating to a specific location	13	Write a program to demonstrate the application of intent class
	50	Adding Marker		
	51	Geo Coding and reverse Geo coding		
	52	Content Provider : Sharing data		
14th	53	view contacts	14	Write a program to create a text file in a external memory
	54	Add contacts, Modify contacts, Delete Contacts		
	55	Storage : Store and Retire data's in Internal and External Storage		
	56	SQLite, Creating and using databases		
15th	57	Android Service : Consuming Web service using HTTP	15	Write a program to store and fetch data from SQL life database.
	58	downloading binary Data,		
	59	Downloading Text Content		
	60	Accessing Web Service		