Govt. College Narwana Jind

Week Wise Lesson Plan 2023-24(Odd 1st Semester)

Sukhbir Extension Lecturer Computer Sci.(skill enhancement course)

	September
Week 1	Operating system:- definition , functions, types of operating system, basic of popular operating systems. Practical
Week 2	The user interface, exploring computer, icons, taskbar, desktop, using menu and menu selection, managing files and folders. Practical
Week 3	Control panel:- display properties, add / remove software and hardware, common utilities , practical
Week 4	Word processing:- introduction to word processing, menus creating ,editing and formatting, practical
Week 5	Revision
	October
Week 1	Spell checking, printing, views, tables,Copying of cells mathematical , statistical and financial function, practical
Week 2	Word art, mail merge, macros, inserting hyperlinks, searching for text, practical
Week 3	Modifying page setup, applying document themes, applying document style sets, practical
Week 4	Inserting header and footers,Manipulation of cells:-inter text numbers and dates cell height and widths, practical
Week 5	Spreadsheet:- elements of electronics spreads sheets, applications creating and opening spreadsheet, menus, practical
Week 5	Revision
	November
Week 1	Mid term exam
Week 2	Types of presentation views , using sound ,Drawing different types of charts, sort and filters data, practical
Week 3	Animation , working with object, printing,Presentation software:- creating modifying and enhancing a presentation, practical
Week 4	Slide sorter view, inserting in built sound effect, inserting recorded sound effect, practical
Week 5	Assignment and class test
	December
Week 1	Resizing and moving pictures , modifying pictures , adding clip art, work with word art, practical
Week 2	Practical
Week 3	Practical

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Week Wise Lesson Plan 2023-24(Odd 1st Semester)

Sukhbir Extension Lecturer Computer Sci.(BCA foundation of computer science)

	August
Week 1	Computer components, generation of computers, Characteristics and classification of computers, strength and limitations of computer hardware, software, application of computer in various fields.
Week 2	Firmware, memory and its types :- random access , sequential access, shareware, freeware, firmware, free software. Magnetic disk, optical disc, flash memory programming language low level programing language, high level programing language
Week 3	Assembler, compiler , interpreter, Peripheral device:- keyboard , pointing device mouse, trackball, touch panel
Week 4	Joystick, light pen, scanners, monitor, OMR, bar-code reader, hard copy devices, Impact and non – impact printers daisy wheel, Dot matrix
Week 5	Memory system:- concept of bit, byte, word, nibble, storage location and addresses, measuring units of storage capacity, access time, memory hierarchy primary memory:- RAM, ROM, PROM, EPROM.
	September
Week 1	Secondary memory:- types of storage device , magnetic tape, hard disk, optical disk, flash memory, input output device,
Week 2	Introduction to operating system, function of operating system, types of operating system, types of operating system.
Week 3	The internet:- introduction to network and internet, history, Electronic mail , attaching a document with e-mail, FTP, TelnetWeb browser ,internet search engine, what is multimedia, Multimedia components:- text, graphics
Week 4	world wide web ,URL, animation, audio, printer classification, laser, ink jet, dot matrix, plotter
Week 5	Revision and Test Assignments
	October
Week 1	Video , multimedia application, What is an operating system, types of operating system, user interface.
Week 2	Starting windows , using the mouse, using the mouse, start menu, shutting down, customizing the desktop.
Week 3	Maximize, minimize, restoring, moving resizing and closing an application window.

Week 4	control panel, Taskbar, window explorer , creating new folder or file, copying and moving files and folder
Week 5	Revision
	November
Week 1	Mid term exam
Week 2	recycle bin, Using system tools, user account, threats:- physical and non physical threats, virus, worm, trojan, spyware, security mechanism, security awareness, backup and recovery.
Week 3	creating shortcuts on desktop, windows media player, window accessories, Electronic mail:- introduction, advantage, disadvantage, user id password, message components, browser and search engines
Week 4	Number system:- binary number, octal number, decimal number, hexadecimal number, convert all number to each other.
Week 5	Assignment and test
	December
Week 1	control panel, Taskbar, window explorer , creating new folder or file, types of software:- application software, system software.
Week 2	Practical
Week 3	Practical

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Week Wise Lesson Plan 2023-24(Odd 3rdSemester)

Sukhbir Extension Lecturer Computer Sci.(operating system)

	August
Week 1	Introductory Concepts: Operating system functions and characteristics
Week 2	historical evolution of operating systems
Week 3	Real time systems, Distributed systems, Methodologies for implementation of O/S service system calls, system programs.
Week 4	Process management: Process concepts, Process states and Process Control Block.
Week 5	CPU Scheduling: Scheduling criteria, Levels of Scheduling, Scheduling algorithms
	September
Week 1	Multiple processor scheduling. Deadlocks: Deadlock characterization, Deadlock prevention and avoidance

Week 2	Deadlock detection and recovery, practical considerations.
Week 3	Concurrent Processes: Critical section problem, Semaphores, Classical process co-ordination problems and their solutions
Week 4	Scheduling algorithm :- FCFS, SJF, PRIORITY, ROUND ROBIN
Week 5	Revision and Test
	October
Week 1	Assignments
Week 2	Inter-process Communications. Storage Management, memory management of single-user and multiuser operating system, partitioning, swapping
Week 3	paging and segmentation, virtual memory,
Week 4	Page replacement Algorithms, Thrashing, Device and file management: Disk scheduling,
Week 5	Revision
	November
Week 1	Mid term exam
Week 2	File access and allocation methods, Directory Systems: Structured Organizations, directory and file protection mechanisms.
Week 3	Secondary Storage Structure: Disk Structure, Disk Scheduling: FCFS
Week 4	SSTF, SCAN, C-SCAN, LOOK; Selection of Disk Scheduling Algorithm
Week 5	Assignment and class test
	December
Week 1	Disk structure, Disk management, File Systems: Functions of the system
Week 2	Practical
Week 3	Practical

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Week Wise Lesson Plan 2023-24(Odd 3rdSemester)

Sukhbir Extension Lecturer Computer Sci.(information security)

	August
Week 1	Basic encryption and decryption , introduction to cipher
Week 2	monoalphabetic substitutions such as the Caesar cipher
Week 3	Cryptanalysis of monoalphabetic ciphers, Polyalphabetic ciphers such as vigenere tableaux
Week 4	Cryptoanalysis of polyalphabetic ciphers, Perfect substitution cipher such as the cernam cipher

Week 5	stream and block ciphers, revision
	September
Week 1	Properties of arithmetic operations :- inverse , primes , greatest common divisor
Week 2	Euclidean algorithm , modular arithmetic, Computing the inverse
Week 3	Fermat theorem , algorithm for computing inverse , random number generation
Week 4	Cryptoanalysis of polyalphabetic ciphers, Perfect substitution cipher such as the cernam cipher
Week 5	Revision and Test
	October
Week 1	Assignments
Week 2	Secure secret key (symmetric) system: data encryption standard (DES) analyzing and strengthening of DES
Week 3	Public key (asymmetric key) encryption system:- concept of public key encryption system
Week 4	Introduction to markle, introduction to hellman knapsacks, Introduction to rivest ,introduction to Shamir
Week 5	Introduction to Adelman , RSA encryption algorithm, Digital signature algorithm (DSA)
	November
Week 1	Mid term exam
Week 2	Algorithm such as MD4 and MD5
Week 3	secure hash algorithm (SHA)
Week 4	Revision
Week 5	Assignment and class test
	December
Week 1	hash algorithms:- hash concept, description of hash algorithm
Week 2	Practical
Week 3	Practical

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Week Wise Lesson Plan 2023-24(Odd 5thSemester)

Sukhbir Extension Lecturer Computer Sci.(Data Warehousing)

	August
Week 1	Introduction to data warehouse, data warehouse delivery method
Week 2	System process:- typical process flow within a data warehouse, exact and load process
Week 3	Clean and transform data , backup and archive process, Query management process , process

	architecture :- load manager, warehouse manager
Week 4	Query manager, detailed information summary information , metadata, data marting
Week 5	snowflake schema, fact constellation schema, revision
	September
Week 1	Assignments, Identifying fact and dimensions , designing fact tables , designing dimension table
Week 2	Designing various schema , query redirection
Week 3	Partitioning strategy:- horizontal partitioning , vertical partitioning , hardware partitioning ,sizing the partition
Week 4	Database schema :- starflake schema, server hardware
Week 5	Aggregations: - need of aggregation , designing summary tables revision , Revision and Test
	October
Week 1	Data marting:- introduction ,need of data mart, design of data mart , cost of data mart
Week 2	Metadata :- data transformation and load, data management, query generation , hardware architecture:- process
Week 3	Metadata and tools , process managers : - need of tools to manage data warehouse, network hardware, client hardware
Week 4	System manager, data warehouse process managers, load manager , warehouse manager, query manager
Week 5	load manager , warehouse manager, query manager, data transformation and load
	November
Week 1	Mid term exam
Week 2	disk technology , database layout, filesystems
Week 3	backup and recovery :- backup strategies, testing the strategy, disaster recovery
Week 4	Operating Datawarehouse:- introduction , day to day operations of data warehouse
Week 5	Assignment and class testPhysical layout:- parallel technology
	December
Week 1	Clean and transform data , backup and archive process, Query management process , process architecture :- load manager, warehouse manager
Week 2	Practical
Week 3	Practical