

Govt. College for Girls , Sector-14, Gurugram

Name of the Assistant Professor : Mrs. Manjula Verma

Class : MCA 3rd Semester

SUBJECT & CODE : OPERATING SYSTEM I /MCA3502

Month	Syllabus
21 July & to 23 July to 28 July	Unit-I: Operating systems overview: Operating systems as an extended machine & resource manager, Operating systems classification;
30 July to 4 August	Operating systems and system calls; Operating systems architecture
6 August to 11 August	Unit-2: Process Management functions: Process model, hierarchies, and implementation
13 August to 18 August	process states and transitions; multi-programming, multi-tasking, multi-threading;
20 August to 25 August	level of schedulers and scheduling algorithms
27 August to 1 Sept	Unit-3: Memory Management and Virtual Memory : Logical versus Physical Address Space,
3 Sept to 8 Sept	Swapping, Contiguous Allocation, Paging, Segmentation, . Assignment-1
10 Sept to 15 Sept	Segmentation with Paging, Demand Paging, Performance of Demanding Paging, Page Replacement
17 Sept to 22 Sept	Page Replacement, Page Replacement Algorithm, Allocation of Frames, Thrashing Allocation of Frames, Thrashing. Test based on Unit 1 and Unit 2.
24 Sept to 29 Sept	Unit-4: Device Management functions: I/O devices and controllers, interrupt handlers,
1 Oct to 6 Oct	Unit-4: Device Management functions: I/O devices and controllers, interrupt handlers, types of I/O Software: Device independent I/O software, User-space I/O software,
8 Oct to 13 Oct	Terminal I/O software. Disk scheduling. File management functions: file naming, structure, types
15 Oct to 20 Oct	access mechanisms, attributes and operations; directory structures and directory operations; file space allocations;
22 Oct to 27 Oct	file sharing, file locking; symbolic links; file protection and security: distributed file systems. Test based on Unit 3 and Unit 4.
29 Oct to 3 Nov & 5 Nov.	Unit-5 : Concurrent programming: sequential and concurrent process; precedence graph, Bernstein's condition; time dependency and critical code section, mutual exclusion problem;
6 Nov. To 13 Nov.	University Vacations
14 Nov. To 17 Nov.	classical process co- ordination problems; deadlock handling, inter-process communication. Assignment-2
19 Nov. To 21 Nov.	Unix Operating System: Overview of UNIX OS in general and implementation of all above functions in Unix Operating System.

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Name of the Assistant Professor : Mrs. Manjula verma

Class : M.Sc. 1st Sem

Subject & Code :Computer Fundamentals and Programming in C

Month	Syllabus
1 st Aug to 4 Aug	Computer Fundamentals: concept of data and information; Component of Computer: Hardware Input Device, Output Device. CPU: Component of CPU; <u>Memory and Storage Devices</u>
6 th Aug to 41 Aug	Computer Software: system Software and Appl'cation Software; Functions of Operating System. Programming Languages: Machine, Assembly, High Level language, 4GL; Language Translator; linker, Loader; Classification of Computers: Micro, Mini, Mainframe, Super computer. Advantages of Computer, Limitations of Computer,
13 Aug to 18 Aug	Range of Applications of Computer, Social concerns of Computer Technology: Positive and Negative Impacts, Computer Crimes, Viruses and their remedial solutions
20 th Aug to 25 Aug	Problem Solving: Problem Identification, Analysis, Flowcharts, Decision Tables, Pseudo codes and algorithms, Pseudocoding, Program Testing and Execution C Programming Fundamentals: Keywords, Variable Constants, Structure of a C
27 Aug to 1 Sep	operators & Expressions: Arithmetic, Unary, Logical, Bit-wise, Assignment & Conditional Operators, Library Functions Control Statements: Looping using while, do-while, for statement Nested loops: decision making using If-else, Else If Ladder, Switch
3 Sep to 8 Sep	Continue and Goto statements Arrays & Functions: Declaration and Initialization; Multidimensional Arrays. String: Operation of Strings./Test-I)
10 Sep to 15 Sep	Functions: Defining & Accessing User defined functions, Function Prototype, Passing Arguments, Passing array as argument, Recursion, Use of Library Functions;
17 Sep to 22 Sep	Pointers: Declaration, Operations on Pointers, Passing to a function, Pointers &
24 Sep to 29 Sep	Array accessing through pointers, Pointer to functions, Function returning pointers, Dynamic Memory Allocations(Assignment-II)
1 Oct to 6 Oct	Structures and Union: Defining and Initializing Structure, Array within Structure, Array of Structure, Nesting of Structure, Pointer to Structure(Test-II)
8 Oct to 13 Oct	Passing structure and its pointer to Functions; Unions: Introduction to Unions and
15 Oct to 20 Oct	File Handling: Opening and closing file in C; Create, Read and Write data to a file; Modes of Files, Operations on file using C Library Functions; Working with Command Line Arguments•
22 Oct to 27 Oct	Program Debugging and types of errors, Revision
28 Oct to 5 Nov	Revision & Assessment
14 Nov to 17 Nov	Revision & Problem solving

Month	Syllabus
August	
September	
October	
November	VAT(Value added tax) in Tally, Maintenance of Inventory records, Maintenance of Accounting Books and Final Accounts, Generating and Printing of Accounting Reports. Introduction to Statistical Packages (SPSS): Features, Formation of table, Types of graph, uses of SPSS.