**PG.GOVT COLLEGE FOR GIRLS, SECTOR-42, CHANDIGARH**

**Teaching Plan Session Even Semester**

**(2017-18)**

**Class: BCA II (4th Sem) Name of the Teacher: Ms. Nidhi Goyal**

**Subject: Operating System Concepts and Linux Period :3rd (Wed-Sat)**

**Paper : BCA-16-404 Room No : 205**

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| **S. No** | **Date From** | **Date Upto** | | **Topics to be covered** |
| Week 1 | Jan 08, 2018 | Jan 13, 2018 | | Operating Systems (OS): Introduction, its needs and services |
| Week 2 | Jan 15, 2018 | Jan 20, 2018 | | Types of OS: Multi-user,  Multitasking, Multiprocessing and Real time Operating Systems, Parallel systems, Distributed systems |
| Week 3 | Jan 22, 2018 | Jan 27, 2018 | | Process Management: Introduction to Process, PCB, Process States  Process Management: Types of processes, ps, bg, fg, nice, kill. |
| Week 4 | Jan 29, 2018 | Feb 3, 2018 | | CPU Scheduling: Scheduling Criteria and Algorithms: FCFS, SJF, Priority, Round Robin, Multilevel Queue Scheduling, Multilevel Feedback Queue Scheduling |
| Week 5 | Feb 5, 2018 | Feb 10, 2018 | | Introduction to Linux: Linux's shell, Kernel, Features of Linux, History, Minimum system requirements, Boot and Root disks , Starting and stopping Linux system, passwords, logging in and out, |
| Week 6 | Feb 12, 2018 | Feb 17, 2018 | | Terminal Handling commands: who, Understanding wildcards, Environment variables. Understanding I/O Redirection and Piping: Introduction, cut, paste, sort,  tee; Introduction to Regular Expressions and grep. |
| Week 7 | Feb 19, 2018 | Feb 24, 2018 | | Using file system: Introduction to common types of files, Filenames, Introduction to different types of directories: Parent, Subdirectory, Home directory; rules to name a directory, Important directories in Linux File System, Absolute and relative filenames, |
| Week 8 | Feb 26, 2018 | Mar 03 , 2018 | | creating files and directories, listing files (ls), pwd, moving and copying files (mv, cp), moving directories, Removing files and directories, using wildcards with files and  directories, File and directory permissions using relative and absolute methods, Changing  group ownership, umask settings |
| **2nd week March (Mid Semester Exam)** | | | | |
| Week 9 | March 12, 2018 | | March 17, 2018 | Deadlocks: Necessary and sufficient conditions for Deadlocks, Introduction to methods for handling deadlocks |
| Week 10 | March 19 , 2018 | | March 24, 2018 | deadlock detection and recovery Memory Management: Logical vs Physical address space, Swapping, |
| Week 11 | March 26, 2018 | | March 31, 2018 | Introduction to Paging, Segmentation, Virtual Memory-Demand paging |
| Week 12 | April 02, 2018 | | April 07, 2018 | Introduction to Page Replacement algorithms: FIFO, Optimal Page replacement and LRU |
| Week 13 | April 09, 2018 | | April 14 , 2018 | Understanding System Administration activities: Superuser (su) command, Taking backups using tar, Managing disk space, Mounting and Un-mounting file system, Managing users, |
| Week 14 | April 16, 2018 | | April 21, 2018 | Managing printers with lpd, mknod, lpc, lpq, lprm |
| Week 15 | April 23, 2018 | | April 28, 2018 | Vi editor: starting vi, vi modes, inserting text, quitting vi, deleting text, copying and moving text, searching and replacing text. |
| Week 16 | April 30, 2018 | | May 05, 2018 | **Revision of whole syllabus** |

**PG.GOVT COLLEGE FOR GIRLS, SECTOR-42, CHANDIGARH**

**Teaching Plan Session Even Semester**

**(2017-18)**

**Class: BCA I (2nd Sem) Name of the Teacher: Ms. Nidhi Goyal**

**Subject: Computer Organization Period :2nd (Mon-Fri)**

**Paper : BCA-16-202 Room No : 201**

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| **S. No** | **Date From** | **Date Upto** | | **Topics to be covered** |
| Week 1 | Jan 08, 2018 | Jan 13, 2018 | | Computer Organization: Evolution of Computers, Stored program concept and  Von Neumann Architecture |
| Week 2 | Jan 15, 2018 | Jan 20, 2018 | | Information representation and codes, Number System |
| Week 3 | Jan 22, 2018 | Jan 27, 2018 | | Arithmetic algorithms : Addition and  subtraction for signed magnitude and 2's complement numbers, integer multiplication using shift and add |
| Week 4 | Jan 29, 2018 | Feb 3, 2018 | | Combinatorial Blocks : Gates, Multiplexers, Decoders |
| Week 5 | Feb 5, 2018 | Feb 10, 2018 | | Encoders, Sequential Building blocks : Flip Flops, Registers, Counters |
| Week 6 | Feb 12, 2018 | Feb 17, 2018 | | Memory Organization: RAM, Basic cell of static and dynamic RAM, Building large memories using chips, Associative memory |
| Week 7 | Feb 19, 2018 | Feb 24, 2018 | | Cache memory organization,  Virtual memory organization. |
| Week 8 | Feb 26, 2018 | Mar 03 , 2018 | | Assembly Language Programming: Machine and assembly language, Pseudo operations, subroutines in assembly language, Assembly language programs:-To add/subtract two numbers, Program to  input/output one character, Program to demonstrate the use of subroutines. |
| **2nd week March (Mid Semester Exam)** | | | | |
| Week 9 | March 12, 2018 | | March 17, 2018 | Register Transfer Language and micro-operations; Language to represent conditional data  transfer, Arithmetic and logical operations along with register  transfer. |
| Week 10 | March 19 , 2018 | | March 24, 2018 | Architecture of a Simple Processor: An instruction set, Addressing Modes, Instruction formats, |
| Week 11 | March 26, 2018 | | March 31, 2018 | Instruction execution in terms of Microinstructions, Concept of interrupt and simple I/O organization |
| Week 12 | April 02, 2018 | | April 07, 2018 | I/O organization : Strobe based and Handshake based communication, Vector and priority interrupts, DMA  based data transfer; |
| Week 13 | April 09, 2018 | | April 14 , 2018 | CPU organization with large registers, Stacks and handling of  interrupts and subroutines. Concept of Bus, data movement among registers, data movement from/to memory. |
| Week 14 | April 16, 2018 | | April 21, 2018 | System Maintenance, Physical Inspection of a PC and internal cards, Diagnostics on a PC, Functional description of various modules and cards. |
| Week 15 | April 23, 2018 | | April 28, 2018 | PC Doctor, Norton, Simantac, Steps of Diagnostics. Viruses, Types of viruses. Detection, Protection and Cure of Viruses on a PC. |
| Week 16 | April 30, 2018 | | May 05, 2018 | **Revision of whole syllabus** |