DHANEKULA INSTITUTE OF ENGINEERING & TECHNOLOGY

Department of Computer Science & Engineering

LIST OF TEACHING METHODS USED

Name of the Program : B. Tech in Computer Science & Engineering Academic Year : 2023-24

Year & Semester : II Year I Semester Section: B No of Credits : 03

Name of the Course : Operating Systems Code : R20C203

Course : Core /Elective/Allied/Humanities/Management Regulation : R20

Course Area/Module : OS No of students registered : 69

Name of the Faculty : Mrs. K. Srikanth Designation : Asst. Professor

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| --- | --- | --- | --- | --- | --- |
| UNIT No. | Content | Connected CO | Type of material OH Sheet/PPT/CD | No of Slides | Remarks |
| 1 | UNIT 1 | R20C203.1 | PDF | 27 |  |
| 2 | UNIT 2 | R20C203.2 | PDF | 34 |  |
| 3 | UNIT 3 | R20C203.3 | PDF | 28 |  |
| 4 | UNIT 4 | R20C203.4 | PDF | 23 |  |
| 5 | UNIT 5 | R20C203.5 | PDF | 27 |  |

Signature of Course Coordinator Signature of Head of the Department

**DHANEKULA INSTITUTE OF ENGINEERING & TECHNOLOGY**

**LIST OF TEACHING AIDS USED**

Name of the Program : B. Tech in Computer Science & Engineering Academic Year : 2023-24

Year & Semester: II Year I Semester Section: B No of Credits : 1.5

Name of the Course: Operating Systems Lab Code : R20C203

Course: Core Regulation : R20

Course Area/Module: OS No of students registered: 69

Name of the Faculty: Mr. K. Srikanth Designation : Asst Professor

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| **Aid Used** | **Connected CO** | **Level of learning** | **Connected PO** | **Remarks** |
| Lecture by use Boards | R20C203.1 | Understanding (L2) | 1 |  |
| PPT | R20C203 .2 | Applying(L3) | 1 |  |
| Lecture by use Boards | R20C203 .3 | Applying(L3) | 1 |  |
| Lecture by use Boards | R20C203 .4 | Applying(L3) | 1 |  |
| PPT | R20C203 .5 | AnalyzingL5) | 2 |  |

Signature of Course Coordinator Head of the Department

Date: Date:

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| S. No. | Name of the Experiment | Connected CO | Type of material OH Sheet/PPT/CD | No of Slides | Remarks |
| 1 | 1) a) Study of Unix/Linux general purpose utility command list: man, who, cat, cd, cp, ps, ls, mv, rm, mkdir, rmdir, echo, more, date, time, kill, history, chmod, chown, finger, pwd, cal, logout, shutdown.  b) Study of vi editor  c) Study of Bash shell, Bourne shell and C shell in Unix/Linux operating system  d) Study of Unix/Linux file system (tree structure)  e) Study of .bashrc, /etc/bashrc and Environment variables. | R20C203.1 | PDF | 5 |  |
| 2 | Write a C program that makes a copy of a file using standard I/O, and system calls | R20C203.1 | PPT | 2 |  |
| 3 | Write a C program to emulate the UNIX ls –l command. | R20C203.1 | PDF | 2 |  |
| 4 | Write a C program that illustrates how to execute two commands concurrently with a command pipe. Ex: - ls –l | sort | R20C203.1 | PDF | 2 |  |
| 5 | Simulate the following CPU scheduling algorithms: (a) Round Robin (b) SJF (c) FCFS (d) Priority | R20C203.2 | PDF | 5 |  |
| 6 | Multiprogramming-Memory management-Implementation of fork (), wait (), exec() and exit (), System calls | R20C203.2 | PDF | 4 |  |
| 7 | Simulate the following:  a) Multiprogramming with a fixed number of tasks (MFT) b) Multiprogramming with a variable number of tasks (MVT) | R20C203.2 | PDF | 4 |  |
| 8 | Simulate Bankers Algorithm for Dead Lock Avoidance | R20C203.2 | PDF | 2 |  |
| 9 | Simulate Bankers Algorithm for Dead Lock Prevention | R20C203.3 | PDF | 2 |  |
| 10 | Simulate the following page replacement algorithms:  a) FIFO b) LRU c) LFU | R20C203.2 | PDF | 5 |  |
| 11 | Simulate the following File allocation strategies  (a) Sequenced (b) Indexed (c) Linked | R20C203.3 | PDF | 4 |  |
| 12 | Write a C program that illustrates two processes communicating using shared memory | R20C203.3 | PDF | 2 |  |
| 13 | Write a C program to simulate producer and consumer problem using semaphores | R20C203.3 | PDF | 2 |  |
| 14 | Write C program to create a thread using pthreads library and let it run its function. | R20C203.3 | PDF | 3 |  |
| 15 | Write a C program to illustrate concurrent execution of threads using pthreads library. | R20C203.3 | PDF | 2 |  |

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| **Aid Used** | **Connected CO** | **Level of learning** | **Connected PO** | **Remarks** |
| PPT | R20C207.1 | Applying(L3) | **1** |  |
| Using ICT Tools | R20C207.2 | Applying(L3) | **1** |  |
| Using ICT Tools | R20C207.3 | Analyzing(L4) | **2** |  |

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