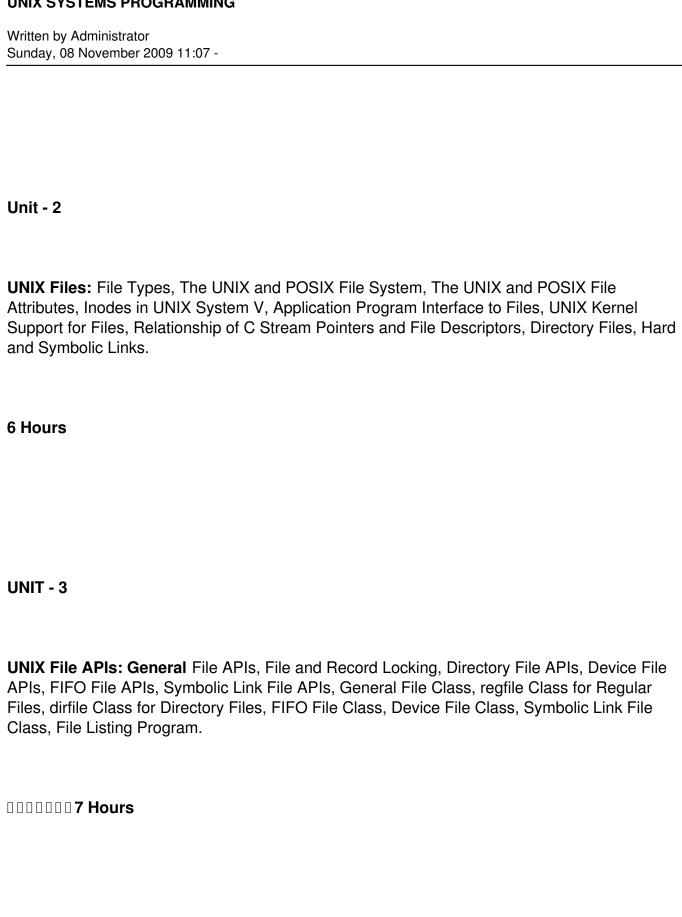
| Written by Administrator Sunday, 08 November 2009 11:07 - |
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| |
| Subject Code |
| |
| : 06CS62 |
| |
| IA Marks |
| |
| : 25 |
| |
| |
| No. of Lecture Hours/Week |
| |
| : 04 |
| |
| Exam Hours |
| |
| : 03 |
| |
| |

| Written by Administrator Sunday, 08 November 2009 11:07 - |
|---|
| Total No. of Lecture Hours |
| |
| : 52 |
| |
| Exam Marks |
| |
| : 100 |
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| PART - A |
| PANI-A |
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| Unit - 1 |
| |
| Introduction: UNIX and ANSI Standards: The ANSI C Standard, The ANSI/ISO C++ |
| Standards, Difference between ANSI C and C++, The POSIX Standards, The POSIX.1 FIPS Standard, The X/Open Standards. |
| |
| UNIX and POSIX APIs: The POSIX APIs, The UNIX and POSIX Development Environment, |
| API Common Characteristics. |
| |
| 6 Hours |

Unit - 4



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UNIX Processes: The Environment of a UNIX Process: Introduction, main function, Process Termination, Command-Line Arguments, Environment List, Memory Layout of a C Program, Shared Libraries, Memory Allocation, Environment Variables, setjmp and longjmp Functions, getrlimit, setrlimit Functions, UNIX Kernel Support for Processes.

0000000000000**7 Hours**

PART - B

Unit - 5

Process Control: Introduction, Process Identifiers, fork, vfork, exit, wait, waitpid, waited, wait3, wait4 Functions, Race Conditions, exec Functions, Changing User IDs and Group IDs, Interpreter Files, system Function, Process Accounting, User Identification, Process Times.

Process Relationships: Introduction, Terminal Logins, Network Logins, Process Groups, Sessions, Controlling Terminal, tcgetpgrp, tcsetpgrp, and tcgetsid Functions, Job Control, Shell Execution of Programs, Orphaned Process Groups.

| UNIX SYSTEMS PROGRAMMING |
|--|
| Written by Administrator Sunday, 08 November 2009 11:07 - |
| 7 Hours |
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| Unit - 6 |
| Signals and Daemon Processes: Signals: The UNIX Kernel Support for Signals, signal, Signal Mask, sigaction, The SIGCHLD Signal and the waitpid Function, The sigsetjmp and siglongjmp Functions, Kill, Alarm, Interval Timers, POSIX.lb Timers. |
| |
| Daemon Processes: Introduction, Daemon Characteristics, Coding Rules, Error Logging, Single-instance daemons; Daemon conventions; Client-Server Model. |
| 7 Hours |
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| Unit - 7 |
| |

Interprocess Communication: $\[\] \[\] \$

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| 6 Hours |
|---|
| Unit - 8 |
| Network IPC: SOCKETS: Introduction; Socket Descriptors; Addressing; Connection establishment; Data transfer; Socket options; Out-of-band data; Nonblocking and asynchronous I/O. |
| |
| 6 Hours |
| Text Books: |
| 1 Unix System Programming Using C++ - Terrence Chan, PHI, 1999. |
| 2 Advanced Programming in the UNIX Environment - W.Richard Stevens, Stephen A. Rago, 2 nd Edition, Pearson Education / PHI, 2005. |

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Reference Books:

| 1. | Advanced Unix Programming- | Marc J. | Rochkind, | 2 nd Edition | , Pearson | Education, |
|-------|-----------------------------------|---------|-----------|-------------------------|-----------|------------|
| 2005. | | | | | | |

- 2. **The Design of the UNIX Operating System** Maurice.J.Bach, Pearson Education / PHI, 1987.
- 3. Unix Internals Uresh Vahalia, Pearson Education, 2001.