PES INSTITUTE OF TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TEST-1 PORTIONS

SUBJECT: UNIX SYSTEM PROGRAMMING ( CS ONLY)

SUBJECT CODE: 10CS352

**UNIT – I 12 Hours**

**Unix System Overview:** Introduction, UNIX Architecture, **File I/O:** Introduction, File Descriptors, open Function, creat Function, close Function, lseek Function, read Function, write Function, I/O Efficiency, File Sharing, Atomic Operations, dup and dup2 Functions, Functions, fcntl Function, Function, **Files & Directories:** Introduction, stat, fstat, & lstat Functions, File Types, Set–User–ID and Set–Group–ID, File Access Permissions, Ownership of New Files and Directories, access Function, umask, chmod, fchmod Functions, chown, fchown, & lchown Functions, File Size, File Truncation, File Systems, link, unlink, remove, & rename Functions, Symbolic Links, symlink & readlink Functions, File Times, utime Function, mkdir, & rmdir Functions, Reading Directories, chdir, fchdir getcwd Functions.

**UNIT – II 12 Hours**

**Process Environment:** Introduction, main Function, Process Termination, Command–Line–Arguments, Environment List, Memory Layout of a C Program, Shared Libraries, Memory Allocation, Environment Variables, **Process Control:** Introduction, Process Identifiers, fork, vfork, exit Functions, wait, waitpid, waited, wait3, and wait4 Functions, Race Conditions, exec Functions, Shell Execution of Programs.

**Text Book:**

Advanced Programming in Unix Environment 2nd edition by W.Richard Stevens , Stephen A. Rago

Prof N.S Kumar

(C.I & C.C.I)