Register Number .....

B.E. DEGREE EXAMINATIONS: NOVEMBER 2009

Fifth Semester

COMPUTER SCIENCE AND ENGINEERING

U07CSE02: UNIX Internals

Time: Three hours **Maximum Marks: 100**

Answer ALL the Questions:-

PART A (10 x 1 = 10 Marks)

1. Unix can be best described as
   a) single user single processing system
   b) single user multi processing system
   c) multi user single processing system
   d) multi user multi processing system
2. The "Multics" is to provide simultaneous access of
   a) Computation power b) Data Storage
   c) Maintaining their Integrity d) all the above
3. _____describes the state of a UNIX file system
   a) inode b) Superblock c) control block d) all the above
4. The algorithm _____ releases the inode
   a) iput b) namei c) create d) iget
5. Which is not a SCCS command?
   a) Admin b) get c) ps d) none
6. The open system call returns on integer called _____
   a) pointer b) User file descriptor c) linker d) status indicator
7. _____ system call creates a new process.
   a) Create b) Open c) new d) Fork
8. The process share the CPU in a _____ manner
   a) swapped b) sleeping c) Zombie d) preempted
9. Choose the calls used for process management.
   a) getpid() To get a process identifier of the current process
   b) getppid() To get parent process identifier
   c) nice() To bias the existing priority of a process
   d) all the above

10. IPC stands for

a) Inter processor Communication b) Inter Process Communication

c) Inter Process Computing d) Inter Processor Computing 24

PART B (10 x 2 = 20 Marks)

11. Write down the characteristics of UNIX file system?
12. Define Sleep and Wakeup 25.
13. Define buffer cache.
14. Define inode.
15. Define dup.
16. Define Mounting system call and their syntax.
17. What are the fields of process table?
18. Define context switch
19. Define clock interrupts and function
20. Explain user priorities and kernel priorities

PART C (5 x 14 = 70 Marks)

21. (a) Explain the details Operating System services.

(OR)

(b) (i) Explain the details about UNIX System Architecture

(ii) Briefly details about System Structure

22. (a) (i) Explain the algorithm for converting the path name to inode

(ii) Explain the system call used for creating the special files

(OR)

(b) Write notes on the following

a) Directories

b) Super blocks

23. (a) (i) Discuss the read system call and algorithm

(ii) Discuss the write system call and algorithm

(OR)

(b) Explain how a file is mounted and unmounted from the file structure.

24. (a) Describe the state transition that a process undergoes during its lifetime.

(OR)

(b) Write the algorithm involved in creating a new process and explain it.

25. (a) Explain in detail about driver interfaces in the I/O Subsystem.

(OR)

(b) Explain in detail about memory management policies.

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