ANNA UNIVERSITY COIMBATORE

B.E. / B.TECH. DEGREE EXAMINATIONS : MAY / JUNE 2010

REGULATIONS – 2007

SIXTH SEMESTER

070230040 - UNIX INTERNALS

(COMMON TO CSE / IT)

TIME : 3 Hours   Max.Marks : 100

PART – A

(20 x 2 = 40 MARKS)

ANSWER ALL QUESTIONS

1. How the Unix file system is characterized?

2. Define a Kernel

3. Write the disk inode of a sample file

4. What is fork System call?

5. What are the building block primitives of UNIX

6. What are the levels of execution of user process on Unix?

7. Mention any two advantages of buffer cache?

8. Write the algorithm for reading a Disk block?

9. What is super block?

10. Trace the use of pipes in Unix.

11. Write the syntax for STAT AND FSTAT.

12. What is the purpose of Dup system call?

13. What are the data structures that describe the state of a process?

14. Write an algorithm on context switch.

15. What is the purpose of Signal? Write any two classifications.

16. Devise a formula for calculating decay of CPU usage and Process priority.

17. List the short comings on demand paging.

18. How device drivers are represented in Unix? Give an example

19. Mention the process scheduling techniques adopted in Unix

20. Mention the functions of Line discipline in Unix

PART – B

(5 x 12 = 60 MARKS)

ANSWER ANY FIVE QUESTIONS

21. a Explain the generic Architecture of Unix Systems.   8

    b Explain in detail the advantages of Unix over other operating systems.   4

22.   Explain in detail the scenarios for retrieval of a Buffer.

23. a Write the procedure for conversion of a byte offset to block number in file system.   6

    b Write the algorithm for conversion of a path to an inode.   6

24.   Explain in detail the Read System Call and Write System Call.

25.   Draw the process state transition diagram in Unix and explain

26.   Write the Algorithm for Booting the system and Init.

27   Write the Algorithm for allocating Space from Maps.

28.   Show how I / O bound process are handled in Unix with a suitable example

*****THE END*****