K.S INSTITUTE OF TECHNOLOGY, BENGALURU-560109

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

18CS56–UNIX PROGRAMMING

EXHAUSTIVE QUESTION BANK

MODULE-3

1. Explain how fcntl API is used for file and record locking
2. Explain file and record locking?
3. Explain directory file and device file APIs?
4. Explain symbolic link API?
5. Explain Directory link API
6. Explain Device File API
7. Explain FIFO File API
8. Write an explanatory note on environment variables
9. Describe the UNIX Kernel support for process. Show the related data structures
10. Bring out the importance of locking files. Explain in brief the types of lock with API.
11. What are the different ways in which a process can terminate? With a neat block schematic,explain how a process is launched and terminates clearly indicating the role of C- startup routine and the exit handlers.
12. Explain _exit, exit and atexit functions with their prototypes.
13. With a neat diagram, explain the memory layout of c program. In which segments are the automatic variables and dynamically created objects are stored?
14. Write a short note on command-line arguments?
15. Explain the three functions for memory allocation and alternate memory allocators?
16. Explain setjmp and longjmp functions?
17. Explain getrlimit and setrlimit functions?
18. Explain the following system calls: i)fork ii)vfork iii)exit iv)wait.
19. Explain attributes inherited by child process and attributes that are **different between the parent and child processes:**
20. Explain the following:i)wait ii)waitpid
21. Explain the following:i)waited ii)wait3 iii)wait4
22. What is race condition? Write a program in C/C++ to illustrate a race condition
23. Giving the prototype explain different variant of exec system call.