Viva Questions

1. Define operating system?

2. What are the different types of operating systems?

3. Define a process?

4. What are the contents of PCB?

5. What is CPU Scheduling?

6. Define arrival time, burst time, waiting time, turnaround time?

7. What are the different CPU scheduling criteria?

8. What is the advantage of round robin CPU scheduling algorithm?

9. Which CPU scheduling algorithm is for real-time operating system?

10. In general, which CPU scheduling algorithm works with highest waiting time?

11. Is it possible to use optimal CPU scheduling algorithm in practice?

12. What is the real difficulty with the SJF CPU scheduling algorithm?

13. Differentiate between the general CPU scheduling algorithms like FCFS, SJF etc and multi-level queue CPU Scheduling?

14. What are CPU-bound and I/O-bound processes?

15. What is the need for process synchronization?

16. What is a critical section?

17. Define a semaphore?

18. Define producer-consumer problem?

19. Discuss the consequences of considering bounded and unbounded buffers in producerconsumer problem?

20. Can producer and consumer processes access the shared memory concurrently? If not which technique provides such a benefit?

21. Differentiate between a monitor, semaphore and a binary semaphore?

22. Define clearly the dining-philosophers problem?

23. Identify the scenarios in the dining-philosophers problem that leads to the deadlock situations?

24. Define file?

25. What are the different kinds of files?

26. What is the purpose of file allocation strategies?

27. Identify ideal scenarios where sequential, indexed and linked file allocation strategies are most appropriate?

28. What are the disadvantages of sequential file allocation strategy?

29. What is an index block?

30. What is the file allocation strategy used in UNIX?

31. What is dynamic memory allocation?

32. What is external fragmentation?

33. Which of the dynamic contiguous memory allocation strategies suffer with external fragmentation? 34. What are the possible solutions for the problem of external fragmentation?

35. What is 50-percent rule?

36. What is compaction?

37. Which of the memory allocation techniques first-fit, best-fit, worst-fit is efficient? Why?

38. What are the advantages of noncontiguous memory allocation schemes?

39. What is the process of mapping a logical address to physical address with respect to the paging memory management technique?

40. Define the terms – base address, offset?

41. Differentiate between paging and segmentation memory allocation techniques?

42. What is the purpose of page table?

43. Whether the paging memory management technique suffers with internal or external fragmentation problem. Why?

44. What is the effect of paging on the overall context-switching time?

45. Define directory?

46. Describe the general directory structure?

47. List the different types of directory structures?

48. Which of the directory structures is efficient? Why?

49. Which directory structure does not provide user-level isolation and protection?

50. What is the advantage of hierarchical directory structure?

51. Define resource. Give examples.

52. What is deadlock?

53. What are the conditions to be satisfied for the deadlock to occur?

54. How can be the resource allocation graph used to identify a deadlock situation?

55. How is Banker's algorithm useful over resource allocation graph technique?

56. Differentiate between deadlock avoidance and deadlock prevention?

57. What is disk scheduling?

58. List the different disk scheduling algorithms?

59. Define the terms – disk seek time, disk access time and rotational latency?

60. What is the advantage of C-SCAN algorithm over SCAN algorithm?

61. Which disk scheduling algorithm has highest rotational latency? Why?

62. Define the concept of virtual memory?

63. What is the purpose of page replacement?

64. Define the general process of page replacement?

65. List out the various page replacement techniques?

66. What is page fault?

67. Which page replacement algorithm suffers with the problem of Belady's anomaly?

68. Define the concept of thrashing? What is the scenario that leads to the situation of thrashing?

69. What are the benefits of optimal page replacement algorithm over other page replacement algorithms?

70. Why can't the optimal page replacement technique be used in practice?

71)write a command to count the number of words in a file.

72)How can you give execute permission to a bash file

73)write a command to create a file and display the content of file

74)write a command for pattern matching for the letter O in HELLO WORLD

75)system used for creating a process

76)system call wait(&status) means……

77) which are system calls used for file manipulation

78)Write a command used to create directory and remove directory

79)Write the command to identify who is logged into the system

80)What is process and which are the states of process

81)Which command is used to print a message in shell programming

82)Write the syntax of a) if else statement b) switch case and c)while statement in shell programming

83)Shell program to add two numbers

84) Which are the access permissions for a file

85) Syntax of open system call in a file