Aryan College

Open Source Technology

Unit I:

1. What are the advantage of multiprocessor system. (2017)
2. Explain structure of OS Layers. (2017)
3. Briefly compare the different operating system structure. (2017)
4. What does the CPU do when there are no user program to rum? (2016)
5. List down the function of operating system. (2016)
6. Write the three basic function which are provided by hardware clocks and timers. (2016)
7. What is a bootstrap program? (2016)
8. What is an overlay? What is the use of it? (2016)
9. What do you mean by WROM disk. (2016)
10. What is the main difficulty thet a programmer must overcome in writing an operating system for a real time environment? (2016)
11. What are the main advantage the microkernel approach to system design. (2016)
12. What are all the five major categories of system calls? (2015)
13. What is storage area network? (2015)
14. Write the attributes of file? (2015)
15. Define TLB? (2015)
16. What are the function of system program? Write the name of categories in which the system programs can be divided? (2015)
17. Explain the OS architecture and its components? Explain briefly IPC in Linux? (2015)
18. Discuss memory allocation in variable partition multiprogramming with special reference to linlux os memory management? (2015)
19. Write an elaborate note on RAID? (2015)
20. What is role of access matrix for protection? (2015)
21. Explain the linked file allocation method? (2015)
22. What are the major services provided by Kernel Input Output subsystem? (2015)
23. Describe windows xp filesystem in detail? (2015)
24. Define CPU scheduling . (2014)
25. What are the batch system. (2014)
26. Describe function, advantage, disadvantages of batch processing and multiprocessor system. (2014)
27. Explain layered of exokernvel architecture of OS with the help of neat diagram. (2014)
28. What is the system calls? (2013)
29. What is "Process control block"? write it function. (2013)
30. Give the external view of memory manager and write about address space management. (2013)
31.

Unit II:

1. What is SMP? (2017)
2. What is critical region? (2017)
3. What is disk scheduling? (2017)
4. What is thread and what are the advantage of threads? Explain multi threading model in detail. (2017)
5. What is lister process communication mechanism in linux? (2017)
6. What is process ? describe the operation on a process in detail. (2013), (2017)
7. Define mutual exclusion. (2016)
8. What is disk scheduling algorithm would be best to optimize the performance of RAM disk? (2016)
9. Differentiate between logical address and physical address space. (2016)
10. List the advantage of having an inverted page table. (2016)
11. Explain the different disk scheduling algorithm with neat diagram. (2016)
12. Which are criterion used for CPU scheduling? (2015)
13. What is the need of disk scheduling? (2015)
14. Explain process control block? Differentiate between short, medium and long term scheduling? (2015)
15. Differentiate between preemptive and non preemptive scheduling providing suitable example? (2015)
16. Explain and compare the C Look and C Scan disk scheduling algorithm? (2015)
17. Write short note on:- (2015)
    a. LIFO, FIFO, SJF

  b. LRU, Optimal Replacement
  c. Swap space management system
  d. Thread
  e. File access method
  f. Address binding
  g. Rotational Latency
  h. Page Fault

18. What is process control block.   (2014)
19. Explain various disk scheduling technique.   (2014)
20. Consider the following snapshot of system.   (2014)

Process	Allocation A B C D	Max A B C D	Available A B C D
P0	0 0 1 2	0 0 1 2	1 5 2 0
P1	1 0 0 0	1 7 5 0	
P2	1 3 5 4	2 3 5 6	
P3	0 6 3 2	0 6 5 2	
P4	0 0 1 4	0 6 5 6	

  Answer the following questions using bankers algorithm.
  i.   What is the content of matrix need in system in safe state.
  ii.   If a request from process P1 arrive for (0,4,2,0), can the request be generated immediately

21. Write short note on.   (2014)
  a. I/O data transfer scheme
  b. RAID with various level.
22. What do you understand by round Rabin scheduling?   (2013)
23. What do you mean by conflict resolution mechanism?   (2013)
24. Calculate the average waiting time and the average turnaround time FCFS,SJF(Pre-emptive) and SJF(non pre-emptive) algorithm for the following set of process.   (2013)

Process	CPU Burst Time	Arrival Time
P1	6	0
P2	5	1
P3	1	1
P4	4	2

25.

Unit III:

26. What is demand paging?   (2017)
27. What is frame?   (2017)
28. What is socket?   (2017)
29. What is thrashing?   (2013), (2017)
30. Explain virtual memory in brief.   (2016), (2017)
31. Explain necessary condition for dead lock.   (2017)
32. Describe various techniques for structuring the page table in a page memory management scheme. (2017)
33. Describe the virtual memory.   (2017)
34. What is internal fragmentation.   (2016)
35. Is it possible to have a deadlock involving only one process? State your answer. (2016)
36. Define context switch.   (2016)

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37. Briefly explain the disk management and swap space management. (2016)
38. Explain the difference between external fragmentation and internal fragmentation? How to solve the fragmentation problem using paging? (2016)
39. Explain page replacement algorithm. (2016)
40. Consider the following page reference string:
    2,3,4,5,3,2,6,7,3,2,3,4,1,7,1,4,3,2,3,4,7
    Calculate the number of page fault would occur for the following page replacement algorithm with frame size of 3 and 5:
        i. LRU
        ii. FIFO
        iii. Optimal
32. How do you limit the efforts of thrashing? (2015)
33. Define a Seamaphore? State the two parameters? (2015)
41. What is meant by Thrashing give an example? (2015)
42. Discuss segmentation in detail? Compare it with paging? (2015)
43. Define deadlock. (2014)
44. Define between tightly coupled and loosely coupled system. (2014)
45. What is thread. (2014)
46. What is use of fork and exec system calls? (2014)
47. What is resource allocation graph. (2014)
48. Define busy waiting and spin lock. (2014)
49. What is critical section problem. (2014)
50. Explain virtual memory concept with help of diagram where needed. (2014)
51. Different between best fit and worst fit concept. (2014)
52. Explain about contiguous memory allocation . (2014)
53. Consider the following page reference string. (2014)
    1,2,3,4,2,1,5,6,2,1,2,3,7,6,3,2,1,2,3,6.
    How many page fault would occur for the following replacement algorithm, assuring five frames taking into consideration that all frame are initially empty, use following replacement algo.
        i. LRU
        ii. FIFO
        iii. Optimal
54. Give the basic concept of paging. (2014)
55. Write the need for synchronization? (2013)
56. What is semaphore? (2013)
57. What do you understand by demand Segmentation. (2013)
58. What do you mean by resource allocation graph? Why it's useful. (2013)
59. Describe the deadlock? Write it characterization. And method of handling deadlock and prevention (2013)
60. What is page removal? Explain the FIFO, LRU and OPT algorithm of page removal with example (2013)
61. Explain two memory allocation strategies in detail. (2013)
62.

Unit IV:

1. Explain the linux file system in detail. (2017)
2. Explain VI editor (2016),(2017)
3. Explain in brief the Linux Architecture and File System. (2016)
4. Grep with all its attributes (2016)
5. File v/s Directory commands (2016)
6. Tar (Linux) (2016)
7. Basic Networking commands in Linux (2016)
8. Explain Linux memory management (2015)

9. Linux Directory structure   (2015)
10. Explain the salient features of linux.   (2015)
11. What do you mean by free space management? Explain the directory structure of Linux OS?   (2015)
12. Explain kernel architecture   (2014)
13. Why do you need 'Filters' in UNIX.   (2013)
14. Write a short notes.   (2013)
    a. a. Mail
    b. b. Chgrp
    c. c. Ping
    d. d. Tar
    e. e. Kill

Unit V:

1. Write a shell script to print 1 to 10 value   (2017)
2. Explain various looping statement in linux.   (2017)
3. Shell variables   (2016)
4. Local and global variables in Linux program   (2016)
5. Write a shell program to input three number from keyboard and determine largest among them.(2014)
6. Why do have to write a shell script.   (2013)
7. Write the use of $ operator with echo command. Give comments with example.   (2013)
8. What is Unix shell? Why it is used? Describe the general type of shells available in Unix.   (2013)
9. Write a shell script to exchange the values of two variables without using the other variable. (2013)
10. What the use of '?' and '*' wildcards?   (2013)
11.