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Operating System

Unit I:

1. What do you mean by real time system? [2017]
2. What is time sharing? [2017]
3. What is operating system? Write function of OS as resource manager. [2017]
4. Explain the layered system architecture of OS. Compare multiprogramming and multitasking OS. [2017]
5. Explain the concept of multiprogramming [2016]
6. What is batch processing? [2016]
7. Explain the real time system. [2016]
8. Difference between multiprogramming and batch processing. [2016]
9. What is OS? [2014], [2016]
10. What is OS? Difference between kernel & shell and explain various type of OS. [2016]
11. Explain main goal of operating system. [2015]
12. Give difference between multiprogramming and time sharing system. [2015]
13. What do you mean by real time system. [2015]
14. Explain process and thread with reference to Windows 2000. [2015]
15. Explain the virtualization operating system. [2014]
16. Explain the various type of operating system. [2014]
17. Architecture of windows 2000. [2013], [2014]
18. Structure of concurrent system. [2014]
19. Explain thread of windows 2000. [2013]
20. What is time sharing OS? Explain it. [2013]

Unit II:

1. Define response time? [2017]
2. What is thread? [2016], [2017]
3. What is virtual machine? Compare virtual machine with convention multiprogramming system. [2017]
4. Write the difference between pre-emptive and non pre-emptive scheduling. [2017]
5. Write the difference between a process and a program. Draw and explain process state diagram for five state of a process. [2017]
6. Write the name of scheduling algorithm? [2017]
7. Explain shortest job scheduling with an example. [2017]
8. What is process scheduler? [2017]
9. State the characteristics of good process scheduler? [2017]
10. Explain various scheduling criteria. [2016]
11. Explain process state diagram and difference between user level threads and kernel level threads. [2016]
12. What is scheduling difference between pre-emptive and non pre-emptive scheduling and explain round robin scheduling with example. [2016]
13. What is process synchronization. [2016]
14. What is priority base scheduling. [2016]
15. What the purpose of LRU algorithm is used. [2015]
16. Explain major differences between user level thread and kernel supported thread. Under what circumstance is one type is better then other. [2015]
17. Consider the following set of processes with length of CPU burst time given in millisecond.

Process	Burst Time	Priority
P1	10	3
P2	01	1
P3	02	3
P4	01	4
P5	05	2

The processes are assume to have arrived in order P1,P2,P3,P4,P5 all at time zero.

- i) Draw the gantt-charts illustrating the execution of these processes using FCFS,SJF and any non-preemptive priority algorithm.

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- ii) What is turn around time of each process for each of scheduling algorithm in part (i).
18. What is scheduling? Discuss the differences among long term, medium term and long term scheduling. [2015]
19. What is the stages of process life cycle. [2014]
20. Describe the various process scheduling technique. [2014]
21. Which scheduling algorithm suitable for real time OS. [2013]
22. What is process. [2013]
23. In which scheduling policy does the context switching never occur. [2013]
24. Consider a 5 processes whose arrival time, CPU burst time and priority are given as below.

Process	Arrival Time	Burst Time	Priority
P1	0	10	5
P2	0	5	2
P3	2	3	1
P4	5	20	4
P5	10	2	3

Find average turn around time and average waiting for.

- FCFS scheduling
- SJF scheduling (without pre-emption)
- Pre-emptive SJF scheduling
- Non pre-emptive priority scheduling
- Pre-emptive priority scheduling

Unit III:

- What is process control block? [2017]
- What do you mean by inter-process communication? [2015], [2016], [2017]
- What is semaphore? [2017]
- What is deadlock? [2016], [2017]
- Explain the concept of system call. [2017]
- What is concurrent system? [2017]
- What is mutual exclusion? [2017]
- What is critical section. [2016]
- What is dead lock? Explain safe state. [2016]
- Explain the concept of monitor and semaphore. [2016]
- What is page replacement algorithm? Explain first fit, best fit, worst fit and quick fit algorithm. [2016]
- What is deadlock? Explain the technique of deadlock detection and prevention and also explain the condition of deadlock. [2016]
- Explain term mutual-exclusion. [2015]
- Give any one measure to evaluate algorithm. [2015]
- Difference between system call and system programs. [2015]
- Explain essential condition for deadlock to occur. [2015]
- What is critical reason? How do they relate to controlling access to shared resource. [2015]
- What is spooling. [2014]
- What is system call. [2013], [2014]
- What is semaphore. [2014]
- Explain the mutual exclusion property of process. [2014]
- Explain the inter-process communication and explain the critical section of OS. [2014]
- A particular time of computation, the value of a counting semaphore is 7, the 20 P operation and 'X' V operation where completed on this semaphore if the final value of semaphore is 5, then what will be value of X [2013]
- What is critical reason and explain it. [2013]
- What is spooling? Explain it. [2013]
- Explain various type of system call. [2013]
- Explain various type of system programs. [2013]
- What is monitor? Explain how we can solve producer consumer problem through monitor. [2013]

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Unit IV:

1. Discuss various features of Unix operating system. [2017]
2. What is inode table? [2017]
3. What is kernel? [2014], [2016]
4. What is UNIX OS? [2016]
5. One give example of micro kernel based operating system. [2015]
6. Briefly explain the file structure of unix operating system with suitable diagram. Also differentiate between block and inodes. [2015]
7. Write technological difference between windows and Linux. [2014]
8. Explain the file system of Unix. [2014]
9. What is kernel based OS. [2013]
10. Explain architecture of unix operating system with suitable diagram. operating system with suitable diagram [2013]
11. Explain unix file system. [2013]
- 12.

Unit V:

1. What is shell? [2017]
2. Differentiate cp and mv commands. [2017]
3. Give the purpose and syntax of following commands:- [2017]
 - a. Who
 - b. Cmp
 - c. Date
 - d. Pwd
 - e. Ls
4. Explain redirection with suitable example. [2017]
5. What is VI editor. [2015], [2016]
6. Explain any five command with their use. [2016]
7. What is subprogram in unix. [2015]
8. Give name of various type of shell. [2015]
9. Use of linux commands.
 - a. Ls, pwd, cat, chmod [2015]
10. Write unix shell script to find factorial of given number. [2015]
- 11.
12. What is the use of man command in Unix. [2014]
13. What will be the output of following command.
 - a. Cat file1 file2 > file1 [2014]
14. What is the use of shell in OS. [2014]
15. Explain date and tar command. [2014]
16. Explain the steps to create and save file using VI editor. [2014]
17. Write a shell program for decision making and describe the c compiler in unix OS. [2014]
18. Write a shell script for looping structure with use of array. [2014]
19. Explain how we can identify hidden file from other file. [2013]
20. What will be output of following command.
Cat file1 file2 > file1 [2013]
21. If file one has 10 line of code then what will be output of following command.
Data | tee abc | sort file1 | wc -l [2013]
22. Find error in following code and correct it. [2013]
Echo what is you r name
Read name [2013]
23. Write down the value of file descriptor for stderr, stdout and stdin ? [2013]
24. Explain tar command? [2013]
25. Write a shell script to print sum of digits of given number. [2013]
26. Write a shell script to print reverse of given number. [2013]