OPERATING SYSTEM

1. An operating system is a program that manages the computer hardware.
   a.operating system b. input devices c. output devices

2. A common definition is that the operating system is the one program running at all times on the computer usually called the kernel.
   a.kernel b. micro kernel c. program

3. Mainframe computer systems were the first computers used to tackle many commercial and scientific applications.
   a.desktop computer b. mainframe computers c. micro computers

4. Multiprogramming increases cpu utilization by organizing jobs so that the cpu always as one to execute.

5. Time-sharing operating system are even more complex than multiprogramming operating system.

6. Microcomputers were immediately able to adopt some of the technology developed for larger operating system.

7. Network in the simplest terms,is a communication path between two or more systems.

8. A layer of cluster software runs on the cluster nodes.

9. A computer system can be divided roughly into the three components-False

10. Time-sharing is a logical extension of multiprogramming-True

11. When the computer is powered up it needs to have an initial program to run. This initial program is called Bootstrap program.

12. A trap is a software generated interrupt caused either by an error or by specific request from a user program.

13. Direct Memory Access is used for high speed I/O devices.

14. Device Driver sets the DMA controller registers to use appropriate source and destination.

15. Software may trigger an interrupt by executing a special operating called System call.

16. Main Memory is implemented in a semiconductor technology called Dynamic Random access memory.

17. CD-ROM is a cache memory.

18. The transfer rate is the rate at which data flow between the device and the computer

19. Caching is an important principle of computer science

20. Electronic RAM disks are known as solid state

21. The collection of processes on the disk that is waiting to be brought into the memory for execution forms the input queue.

22. The binding of instruction and data to memory addresses can be done in 3 steps.

23. An address generated by the cpu is commonly referred to as a logical address.

24. Address seen by memory unit is referred to as a physical address.

25. The set of all logical address generated by a program is a logical address space.

26. MMU stands for Memory Management Unit.

27. To select a free hole from a set of available holes first fit, best fit and worst fit strategies are used.

28. Compaction is the process of placing all free memory together in one large block.

29. Physical memory is broken into fixed-sized blocks called frames.

30. Logical memory is broken into blocks of same size called pages.

31. The program in execution is called process.
    a)process b)compiler c)program counter d)files

32. The mainmemory is generally the only large storage device that cpu is unable to address and access directly.
    a)process management b)mainmemory c)file management d)I/O management

33. A file is a collection of related information defined by its creator.
    a)memory b)process c)file d)hardware

34. The computer must provide secondary storage to back up main memory.
    a. a)main memory b)secondary memory c)primary memory d)disk scheduling

35. A distributed system is a collection of processors that do not share memory, peripheral devices and clock.
    a)distributed system b)timesharing system c)multiprocessor system d)batch system

36. The processors in the system are connected through a communication network, which can be configure in a number of different ways.
    a)network b)communication network c)protection system d)program control

37. Device control registers are not accessible to users, so that the integrity of the various peripheral devices is protected.
    a)process control b)cpu registers c)program counter d)device control

38. Protection is any mechanism for controlling the access of programs, processes or users to the resources defined by a computer system.
    a)protection b)communication network c)protection system d)program control

39. Protection can improve reliability by detecting latent errors at the interfaces between component subsystems.
    a)system calls b)file management c)protection d)mainmemory management

40. Command interpreter is the interface between the user and the operating system.
    a)contol statement b)contol card interpreter c)shell d)command interpreter

41. Security requires not only an adequate protection system but also consideration of the external environment within which the system operates.

42. Security measures at four levels: Physical, Human, Network, Operating system.

43. The most common approach to authenticating user identity is the use of Password.

44. The Stack or buffer-overflow attack is the most common way for an attacker outside of the system.

45. A Virus is a fragment of the code embedded in a legitimate program.

46. Major security problem for OS is Authentication.

47. To avoid the problem of password sniffing and shoulder sniffing Paired Passwords can be used.

48. A code segment that misuses its environment is called a Trojan horse

49. A Seed is a random number or alphanumeric sequence.

50. Cryptography is used to constrain the potential senders and receivers of the message.

51. Protection refers to a mechanism for controlling the access of programs, processes, or users to the resources defined by the computer system.

52. Mechanisms determine how something will be done and policies determine what will be done.

53. The need-to-know principle is useful in limiting the amount of damage a faulty process can cause in the system.

54. The ability to execute an operation on an object is an access right.

55. A domain is a collection of access rights, each of which is an ordered pair <object-name, rights-set>.

56. When a process executes in monitor mode, it can execute privileged instructions whereas when it executes in user mode, it can invoke only non-privileged instructions.

57. A capability list for a domain is a list of objects together with the operations allowed on those objects.

58. The lock-key scheme is a compromise between access lists and capability lists.

59. Each object and domain has a list of unique bit patterns, called locks and keys.

60. Access lists correspond directly to the needs of the users where Capability lists do not correspond directly to the needs of the users.

61. A process is more than the program code, which is sometimes known as the text section.
    1. a)data section b)program counter c)text section

62. A data section contains global variables.
    a)stack b)data section c)process control block

63. The state of a process is defined in part by the current activity of that process.
    a)PCB b)ready queue c)state

64. Each process is represented in the operating system by a process control block also called as task control block.
    a)registers b)pointer c)task control

65. The messages are sent to and received from mailboxes or ports

66. The processes that are residing in main memory and are ready and waiting to execute are kept on a list called the ready queue.
    a)ready queue b)device queue c)job queue

67. The list of processes waiting for a particular I/O device is called a device queue.
    a)device queue b)multilevel queue c)input queue

68. The Bounded-buffer producer-consumer problem assumes a fixed buffer size.

69. The Long-term scheduler is also called as Job-scheduler.

70. Message passing may be either blocking or non-blocking also known as synchronous and asynchronous.

71. A deadlock state occurs when two or more processes are waiting indefinitely for an event that can be caused only by one of the waiting processes.

72. Multithreaded programs are good candidates for deadlock because multiple threads can complete for shared resources.

73. A process holding at least one resource and waiting to acquire additional resources that are currently being held by other process is the hold and wait condition.

74. Deadlocks can be described more precisely in terms of a directed graph called a system resource-allocation graph.

75. If a system does not employ either a deadlock-prevention or a deadlock-avoidance algorithm,then a deadlock situation may occur.

76. Low resource utilization and starvation are the two main disadvantages of the hold and wait deadlock condition.

77. If the resources are not either available or held by a waiting process, the requesting process must wait.

78. Each process can request resources only in an increasing order of enumeration is the circular wait condition.

79. A directed edge Rj ->Pi is called an
    a.request edge b.assaignment edge c.claim edge

80. According to the circular wait condition ,how will you define " if the tape drive is needed before the printer"?
    a. .F(tape drive)<F(printer
    b. .F(tape drive)>F(printer)
    c. .F(tape drive)<=F(printer)
    d. .F(tape drive)>=F(printer)

81. A deadlock situation may occur if and only if four conditions hold simultaneously in the system. (true)

82. A deadlock eventually cripples system throughput and will cause CPU utilization to drop. (true)

83. An unsafe state lead to a deadlock (false)

84. virtual memory is a technique that allows the execution of processes that may not be completely in memory.
    a.)Virtual Memory b.)Paging c.)Synchronisation d.)Operatingsystem.

85. lazy swapper can be used rather than swapping entire process into memory.
    a.)lazy swapper b.)Demand segmentation

86. Paging is concerned with individual pages of a process
    a.)Paging b.)Hashing c.)deadlocks d.)demand paging .

87. Pager is concerned with individual pages of a process.
    a)Pager b)paging c) deadlock d)Synchronisation

88. Secondary Memory holds those pages that are not present in main memory.
    a)Secondary Memory b)RAM c) ROM d) Virtual Memory

89. Secondary Memory is also known as Swap Device.
    a)Swap device b) swapping c) hard disk d)Floppy disk

90. Section of disk used for high-speed disk is known as Swap space.
    a)Swap space b)Swap device c)Swapping d)Hashing

91. String of memory references is called Reference string
    a)Altering string b)Reference string c)String d)Page replacement.

92. Allocating available memory to each process according to its size is called as Proportional allocation
    a)Equal allocation b) Proportional allocation c)Stack d)Flip flop

93. High paging activity is called as Thrashing.
a)Thrashing b)Deadlock c)Paging d)Searching

94. A Threads is sometimes called lightweight process.
a)Threads b)ROM c)Disk d)Memory

95. Many software packages that run on modern desktop PCs are _____.
a)Multiprocessed b)Timesharing c)Multithreaded d)Reliable

96. The web server running as a traditional single-threaded process, will be service _____ at a time.
a)one client b)many clients c)two clients d)none

97. The benefits of multithreaded programming are
a)Responsiveness b)Resource Sharing c)Economy d)All

98. A _____ is a flow of control within a process.
a)thread b)kernel c)user threads d)pthreads

99. User level threads are threads that are visible to _____ and are unknown to the _____.
a)programmer and kernel b)programmer and threads c)JVM and Operating system
d)none

100.The many to one model maps many user threads to a single kernel thread.
a)one to many b)many to many c)many to one d)one to one

101.The one to one model maps each user thread to a corresponding kernel thread.
a)Many to many b)one to one c)many to one d)one to many

102.Thread pools is usually faster to service a request with an existing thread than waiting to create a thread.
a)Kernel b)Userthreads c)Thread pools d)Pthreads

103._____ is a task of terminating a thread before it has completed.
a)Creation of threads b)Multithreading c)Resource Sharing d) Thread Cancellation