Operating System

Unit 1: Introduction to Operating System

1. Operating system runs in _____ mode.
   a. User mode
   b. Kernel mode
   c. A and B both
   d. None of above
2. Which operations are perform by operating system?
   a. Provide abstraction set of resources
   b. Managing hardware resources
   c. A and B both
   d. None of above
3. Which hardware were used in first generation OS?
   a. Transistors
   b. ICs
   c. LSI circuits
   d. Vacuum tubes and plug boards
4. To access the services of operating system, the interface is provided by the_____.
   a. System calls
   b. Libraries
   c. API
   d. Assembly instructions
5. The CPU, memory and I/O devices are all connected by a _____.
   a. Registers
   b. System bus
   c. Hardware controller
   d. USB
6. The “brain” of computer is known as _____.
   a. Files
   b. Pointer
   c. Stack
   d. CPU
7. Which are the components of a CPU?
   a. Control unit
   b. ALU
   c. Registers
   d. All above
8. To hold variables and temporary results _____ is used.
   a. Registers

b. Memory
c. Transistors
d. Hard disk

9. Which contains the memory address of the next instruction?
   a. Stack pointer
   b. Program counter
   c. General registers
   d. None of above
10. Which is the sequence of three stage pipeline?
   a. Decode unit => Fetch unit => Execute unit
   b. Execute unit => Decode unit => Fetch unit
   c. Fetch unit => Execute unit => Decode unit
   d. Fetch unit => Decode unit => Execute unit
11. What is the full form of BIOS?
   a. Basic Input Output System
   b. Bus Input Output System
   c. Basic Input Output Software
   d. Bus Input Output Software
12. Which operating system run on smart cards?
   a. Real time OS
   b. Smart card OS
   c. Server OS
   d. Multiprocessor OS
13. Which protection code means that owner can read, write, execute the file, the group members can read and write the file and everyone can only read the file?
   a. rwer-xr--
   b. rw-rw-rw-
   c. rwxrw-r--
   d. rwerw-r-
14. Embedded operating systems are used in _____.
   a. TV sets
   b. Cars
   c. MP3 players
   d. All above
15. Every file within the directory hierarchy can be specified by giving it's _____ from the top of the directory hierarchy.
   a. Path name
   b. Tree
   c. File system
   d. None of above

16. What is operating system?
    a. Collection of programs that manages hardware resources
    b. System service provider to the application programs
    c. Link to interface the hardware and application programs
    d. All of above
17. What is the main function of the command interpreter?
    a. To get and execute the next user-specified command
    b. To provide the interface between the API and application program
    c. To handle the files in operating system
    d. None of above
18. By operating system, the resource management can be done via _____.
    a. Time division multiplexing
    b. Space division multiplexing
    c. Time and space division multiplexing
    d. None of above
19. In operating system, each process has its own_____.
    a. Address space and global variables
    b. Open files
    c. Pending alarm, signals and signal handlers
    d. All of above
20. A process can be terminated due to _____.
    a. Normal exit
    b. Fatal error
    c. Killed by another process
    d. All of above
21. Which process is known for initializing a microcomputer with its OS
    a. Cold booting
    b. Boot recording
    c. Booting
    d. Warm booting
22. Root directory of a disk should be placed_____.
    a. At the fixed address in the main memory
    b. At a fixed location on the disk
    c. At the fixed location on system disk
    d. Anywhere on the disk
23. Multiprogramming systems_____.
    a. Are easier to develop than single programming systems
    b. Execute each job faster
    c. Execute more jobs in the same time

d. Are used only on large main frame computers

24. _____ refers to execution of multiple tasks at a time.
    a. Multiprogramming
    b. Multiprocessing
    c. Multitasking
    d. Multithreading
25. _____ system handle large numbers of small request such as check processing at a bank.
    a. Batch
    b. Time-sharing
    c. Transaction processing
    d. Multiprocessing
26. A computer running more than one program at a time is called _____.
    a. Multiprogramming
    b. Multiprocessing
    c. Multitasking
    d. Multithreading
27. A computer using more than one CPU at a time is called _____.
    a. Multiprogramming
    b. Multiprocessing
    c. Multitasking
    d. Multithreading
28. Operating system lies _____.
    a. Below software and hardware
    b. Above software and hardware
    c. Between software and hardware
    d. None of above
29. The operating system installed in printer are _____ operating system.
    a. Personal
    b. Handhelds
    c. Embedded
    d. Sensor node
30. The operating system installed on your personal computer or laptops are _____ operating system.
    a. Personal
    b. Handhelds
    c. Embedded
    d. Sensor node
31. What is the name given to the organized collection of software that controls the overall operation of a computer?

a. Working system
b. Peripheral system
c. Operating system
d. Controlling system

32. Which are the different resources that can be managed by an operating system?
a. Central processing unit
b. Computer memory
c. Input / Output devices
d. All of above

33. Which are the two different modes of operation of computer?
a. User and Kernel
b. Trap and system call
c. User and system
d. User and admin

34. Which of the following error will be handle by the operating system?
a. Power failure
b. Lack of paper in printer
c. Connection failure in the network
d. All of above

35. Which one of the following is not true?
a. A kernel is a program that constitute the central core of the operating system
b. A kernel is the first part of the operating system to load into the memory during the booting
c. A kernel is made of various modules which can not be loaded in running operating system
d. A kernel remains in the memory during the entire computer session

36. Which operating system runs on macbook?
a. Android
b. Mac OS
c. Linux
d. Ubuntu

37. Which operating system runs of iPhone?
a. Mac OS
b. Android
c. Linux
d. iOS

38. Server operating systems provides _____ services.
a. Printing services
b. File service

c. Web service
d. All of above

39. Multiprocessor system have advantage of _____.
    a. Increased Throughput
    b. Expensive hardware
    c. Operating system
    d. Both a and b
40. Multiprogramming of the computer system increases_____.
    a. Memory
    b. Storage
    c. CPU utilization
    d. None of above
41. Which is the example of an open-source operating system?
    a. Unix
    b. Linux
    c. Windows
    d. Both a and b
42. Which are the example of soft real time operating system?
    a. Digital audio
    b. Digital telephone
    c. Multi media system
    d. All of above
43. Which is the example of hard real time operating system?
    a. Digital audio
    b. Aircraft control systems
    c. Multi media system
    d. All of above
44. Which operating system runs on workstations?
    a. Server operating system
    b. Handhelds operating system
    c. Embedded operating system
    d. Sensor node operating system
45. Which are the resources of a computer system?
    a. Processors
    b. Memories
    c. Disks
    d. All of above
46. The software that talks to a controller, giving it command and accepting responses, is called a _____.
    a. Device driver

b. Device controller
c. Driver controller
d. None of above

47. Main memory is called as _____.
    a. Random access memory
    b. Read only memory
    c. Hard disk drive
    d. None of above
48. Which is the non volatile memory?
    a. Random access memory
    b. Read only memory
    c. a and b both
    d. None of above
49. Which hardware were used in second generation OS?
    a. Transistors
    b. ICs
    c. LSI circuits
    d. Vacuum tubes and plug boards
50. _____used as a backup for disk storage and for holding very large data sets.
    a. Transistors
    b. Magnetic taps
    c. a and b both
    d. None of above

Unit 2: Process Scheduling

1. Round robin scheduling falls under the category of _____.
   a. Non-preemptive scheduling
   b. Preemptive scheduling
   c. All of above
   d. None of above
2. What is FIFO algorithm?
   a. First executes the job that came in last in the queue
   b. First executes the job that came in first in the queue
   c. First executes the job that needs minimal processor
   d. First executes the job that has maximum processor needs
3. What is scheduling?
   a. Allowing a job to use the processor
   b. Making proper use of processor
   c. All of above
   d. None of above
4. Orders are processed in the sequence they arrive if _____ rule sequences the jobs.
   a. Earliest due date
   b. Slack time remaining
   c. First come, first served
   d. Critical ratio
5. The strategy of making processes that are logically runnable to be temporarily suspended is called _____
   a. Non preemptive scheduling
   b. Preemptive scheduling
   c. Shortest job first
   d. First Come First Served
6. Which of the following algorithms tends to minimize the process flow time?
   a. First Come First Served
   b. Shortest Job First
   c. Earliest Deadline First
   d. Longest Job First
7. The portion of the process scheduler in an operating system that dispatches processes is concerned with _____.
   a. Assigning ready processes to CPU
   b. Assigning ready processes to waiting queue
   c. Assigning running processes to blocked queue
   d. All of above
8. CPU scheduling is the basis of _____.
   a. Multiprocessor systems

b. Multiprogramming operating systems
c. Larger memory sized systems
d. None of above

9. The switching of the CPU from one process or thread to another is called _____.
   a. Process switch
   b. Task switch
   c. Context switch
   d. All of above
10. What is turnaround time?
   a. The total waiting time for a process to finish execution
   b. The total time spent in the ready queue
   c. The total time spent in the running queue
   d. The total time from the completion till the submission of a process
11. Scheduling is done so as to _____
   a. Increase the turnaround time
   b. Decrease the turnaround time
   c. Keep the turnaround time same
   d. There is no relation between scheduling and turnaround time
12. What is response time?
   a. The total time taken from the submission time till the completion time
   b. The total time taken from the submission time till the first response is produced
   c. The total time taken from submission time till the response is output
   d. None of above
13. What is waiting time?
   a. The total time in the blocked and waiting queues
   b. The total time spent in the ready queue
   c. The total time spent in the running queue
   d. The total time from the completion till the submission of a process
14. In which of the following cases non – preemptive scheduling occurs?
   a. When a process switches from the running state to the ready state
   b. When a process goes from the running state to the waiting state
   c. When a process switches from the waiting state to the ready state
   d. All of the mentioned
15. What are the two steps of a process execution?
   a. I/O & OS Burst
   b. CPU & I/O Burst
   c. Memory & I/O Burst
   d. OS & Memory Burst
16. With multiprogramming _____ is used productively.
   a. Time

b. Space
c. Money
d. All of above

17. The processes that are residing in main memory and are ready and waiting to execute are kept on a list called _____.
    a. Job queue
    b. Ready queue
    c. Execution queue
    d. Process queue
18. The interval from the time of submission of a process to the time of completion is termed as _____.
    a. Waiting time
    b. Turnaround time
    c. Response time
    d. Throughput
19. In priority scheduling algorithm _____.
    a. CPU is allocated to the process with highest priority
    b. CPU is allocated to the process with lowest priority
    c. Equal priority processes can not be scheduled
    d. None of above
20. Which scheduling algorithm allocates the CPU first to the process that requests the CPU first?
    a. First-come, first-served scheduling
    b. Shortest job scheduling
    c. Priority scheduling
    d. None of above
21. In priority scheduling algorithm, when a process arrives at the ready queue, its priority is compared with the priority of _____.
    a. All process
    b. Currently running process
    c. Parent process
    d. Init process
22. Which one of the following can not be scheduled by the kernel?
    a. Kernel level thread
    b. User level thread
    c. Process
    d. None of above
23. Which algorithm is defined in time quantum?
    a. Shortest job scheduling algorithm
    b. Round robin scheduling algorithm

c. Priority scheduling algorithm
d. Multilevel queue scheduling algorithm

24. Which is the most optimal scheduling algorithm?
    a. FCFS – First come First served
    b. SJF – Shortest Job First
    c. RR – Round Robin
    d. None of the mentioned
25. The FCFS algorithm is particularly troublesome for _____.
    a. Time sharing systems
    b. Multiprogramming systems
    c. Multiprocessor systems
    d. Operating systems
26. Preemptive Shortest Job First scheduling is sometimes called _____.
    a. Fast SJF scheduling
    b. EDF scheduling – Earliest Deadline First
    c. HRRN scheduling – Highest Response Ratio Next
    d. SRTN scheduling – Shortest Remaining Time Next
27. Choose one of the disadvantages of the priority scheduling algorithm?
    a. It schedules in a very complex manner
    b. Its scheduling takes up a lot of time
    c. It can lead to some low priority process waiting indefinitely for the CPU
    d. None of above
28. A solution to the problem of indefinite blockage of low – priority processes is _____.
    a. Starvation
    b. Wait queue
    c. Ready queue
    d. Aging
29. Which of the following scheduling algorithms gives minimum average waiting time?
    a. FCFS
    b. SJF
    c. Round – robin
    d. Priority
30. The real difficulty with SJF in short term scheduling is _____.
    a. It is slow
    b. Knowing the length of the next CPU request
    c. It is too complex to understand
    d. None of above
31. An SJF algorithm is simply a priority algorithm where the priority is _____.
    a. The predicted next CPU burst

b. The inverse of the predicted next CPU burst
c. The arrival time
d. Anything the user wants

32. What is ‘Aging’?
    a. Keeping track of cache contents
    b. Keeping track of what pages are currently residing in memory
    c. Keeping track of how many times a given page is referenced
    d. Increasing the priority of jobs to ensure termination in a finite time
33. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time
P1	6
P2	8
P3	7
P4	3

    Assuming the above process being scheduled with the SJF scheduling algorithm.
    a. The waiting time for process P1 is 3ms
    b. The waiting time for process P1 is 0ms
    c. The waiting time for process P1 is 16ms
    d. The waiting time for process P1 is 9ms
34. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time
P1	6
P2	8
P3	7
P4	3

    Assuming the above process being scheduled with the FCFS scheduling algorithm.
    a. The waiting time for process P1 is 3ms
    b. The waiting time for process P1 is 0ms
    c. The waiting time for process P1 is 1ms
    d. The waiting time for process P1 is 8ms
35. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time
P1	5
P2	8
P3	7
P4	13

Assuming the above process being scheduled with the SJF scheduling algorithm. Which process will execute first?

a. P1
b. P2
c. P3
d. P4

36. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time
P1	6
P2	18
P3	7
P4	30

Assuming the above process being scheduled with the FCFS scheduling algorithm. Which process will execute first?

a. P1
b. P2
c. P3
d. P4

37. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time	Priority
P1	6	3
P2	8	2
P3	7	1
P4	3	4

Assuming the above process being scheduled with the priority scheduling algorithm. Which process will execute first if highest priority is 1?

a. P1
b. P2
c. P3
d. P4

38. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time	Priority
P1	9	4
P2	1	1
P3	5	2

P4	2	5

Assuming the above process being scheduled with the priority scheduling algorithm. Which process will execute first if highest priority is 5?

a. P1
b. P2
c. P3
d. P4

39. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time	Priority
P1	6	2
P2	8	3
P3	7	1
P4	3	4

Assuming the above process being scheduled with the priority scheduling algorithm with highest priority=1.

a. The waiting time for process P1 is 5ms
b. The waiting time for process P1 is 0ms
c. The waiting time for process P1 is 2ms
d. The waiting time for process P1 is 7ms

40. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time	Priority
P1	3	3
P2	12	2
P3	7	5
P4	9	1

Assuming the above process being scheduled with the priority scheduling algorithm with highest priority=5.

a. The waiting time for process P3 is 2ms
b. The waiting time for process P3 is 0ms
c. The waiting time for process P3 is 12ms
d. The waiting time for process P3 is 6ms

41. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time
P1	2
P2	1
P3	6
P4	12

Assuming the above process being scheduled with the SJF scheduling algorithm.

a. The waiting time for process P4 is 9ms

b. The waiting time for process P4 is 0ms

c. The waiting time for process P4 is 5ms

d. The waiting time for process P4 is 4ms

42. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time
P1	4
P2	5
P3	1
P4	12

Assuming the above process being scheduled with the SJF scheduling algorithm.

a. The waiting time for process P2 is 3ms

b. The waiting time for process P2 is 5ms

c. The waiting time for process P2 is 6ms

d. The waiting time for process P2 is 9ms

43. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time
P1	6
P2	14
P3	10
P4	11

Assuming the above process being scheduled with the SJF scheduling algorithm.

a. The waiting time for process P3 is 20ms

b. The waiting time for process P3 is 11ms

c. The waiting time for process P3 is 6ms

d. The waiting time for process P3 is 0ms

44. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time
P1	4
P2	9
P3	1
P4	11

Assuming the above process being scheduled with the FCFS scheduling algorithm.

a. The waiting time for process P1 is 11ms

b. The waiting time for process P1 is 0ms

c. The waiting time for process P1 is 12ms
d. The waiting time for process P1 is 9ms

45. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time
P1	16
P2	5
P3	12
P4	2

Assuming the above process being scheduled with the FCFS scheduling algorithm.
a. The waiting time for process P4 is 16ms
b. The waiting time for process P4 is 21ms
c. The waiting time for process P4 is 33ms
d. The waiting time for process P4 is 2ms

46. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time
P1	6
P2	2
P3	5
P4	3

Assuming the above process being scheduled with the SJF scheduling algorithm.
a. The start time for process P1 is 0ms
b. The start time for process P1 is 6ms
c. The start time for process P1 is 10ms
d. The start time for process P1 is 8ms

47. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time
P1	9
P2	8
P3	7
P4	6

Assuming the above process being scheduled with the SJF scheduling algorithm.
a. The start time for process P3 is 6ms
b. The start time for process P3 is 7ms
c. The start time for process P3 is 8ms
d. The start time for process P3 is 0ms

48. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time
P1	2
P2	18
P3	12
P4	20

Assuming the above process being scheduled with the FCFS scheduling algorithm.

a. The start time for process P1 is 2ms

b. The start time for process P1 is 0ms

c. The start time for process P1 is 18ms

d. The start time for process P1 is 32ms

49. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time
P1	6
P2	8
P3	7
P4	3

Assuming the above process being scheduled with the FCFS scheduling algorithm.

a. The start time for process P3 is 6ms

b. The start time for process P3 is 8ms

c. The start time for process P3 is 14ms

d. The start time for process P3 is 3ms

50. Consider the following set of processes, the length of the CPU burst time given in milliseconds.

Process	Burst Time
P1	12
P2	5
P3	7
P4	10

Assuming the above process being scheduled with the SJF scheduling algorithm.

a. The waiting time for process P1 is 22ms

b. The waiting time for process P1 is 0ms

c. The waiting time for process P1 is 10ms

d. The waiting time for process P1 is 17ms

Unit 3: Interprocess Communication

1. What is Inter process communication?
   a. Allows processes to communicate and synchronize their actions when using the same address space
   b. Allows processes to communicate and synchronize their actions without using the same address space
   c. Allows the processes to only synchronize their actions without communication
   d. None of above
2. Message passing system allows processes to _____.
   a. Communicate with one another without resorting to shared data
   b. Communicate with one another by resorting to shared data
   c. Share data
   d. Name the recipient or sender of the message
3. Messages sent by a process _____.
   a. Have to be of a fixed size
   b. Have to be a variable size
   c. Can be fixed or variable sized
   d. None of above
4. A race condition refers to _____.
   a. A situation where several processes access and manipulate the same data concurrently
   b. A situation where single process access and manipulate the same data concurrently
   c. A situation where no process access and manipulate the same data concurrently
   d. None of the above

5. In producer- consumer problem using shared memory, select appropriate statement from below.
   a. We must have available a buffer of items that can be filled by the producer and emptied by the consumer
   b. A producer can consume one item while the consumer is producing another item
   c. No synchronization required between the producer and consumer, so that the consumer does not try to consume an item that has not yet been produced
   d. The buffer will reside in a region of memory that need not be to shared by the producer and consumer processes
6. A situation where several processes access and manipulate the same data concurrently and the outcome of the execution depends on the particular order in which access takes place is called _____.
   a. Data consistency
   b. Race condition
   c. Aging
   d. Starvation

7. Mutual exclusion implies that _____.
   a. If a process is executing in its critical section, then no other process must be executing in their critical sections
   b. If a process is executing in its critical section, then other processes must be executing in their critical sections
   c. If a process is executing in its critical section, then all the resources of the system must be blocked until it finishes execution
   d. None of the mentioned
8. Semophores are used to solve the problem of_____.
   a. Race condition
   b. Process synchronization
   c. Mutual exclusion
   d. Belady problem
9. Semaphores function is to_____.
   a. Synchronize critical resources to prevent deadlock
   b. Synchronize processes for better CPU utilization
   c. Used for memory management
   d. None of above
10. A binary semaphore_____.
   a. has the values one or zero
   b. is essential to binary computers
   c. is used only for synchronization
   d. is used only for mutual exclusion
11. What are the two kinds of semaphores?
   a. Mutex, Counting
   b. Binary , Counting
   c. Counting, Decimal
   d. Decimal, Binary
12. The section of code which accesses shared variables is called as _____.
   a. Critical section
   b. Block v
   c. Procedure
   d. Semaphore
13. Semaphore can be used for solving _____.
   a. Wait & signal
   b. Deadlock
   c. Synchronization
   d. Priority
14. If a process is executing in its critical section, then no other processes can be executing in their critical section. This condition is called_____.

a. Mutual exclusion
b. Critical exclusion
c. Synchronous exclusion
d. Asynchronous exclusion

15. Which one of the following is a synchronization tool?

a. Thread

b. Pipe

c. Semaphore

d. Socket

16. Mutual exclusion can be provided by the_____.

a. Mutex locks

b. Binary semaphores

c. Both A and B

d. None of above

17. A monitor is a module that encapsulates_____.

a. Shared data structures

b. Procedures that operate on shared data structure

c. Synchronization between concurrent procedure invocation

d. All of above

18. To enable a process to wait within the monitor,_____.

a. Condition variable must be declared as condition

b. Sondition variables must be used as boolean objects

c. Semaphore must be used

d. All of above

19. In the bounded buffer problem, there are the empty and full semaphores that,_____.

a. Count the number of empty and full buffers(slots)

b. Count the number of empty and full memory spaces

c. Count the number of empty and full queues

d. None of above

20. What does TSL Stand for?

a. Test and secure lock

b. Test and Set Lock

c. Type and Set lock

d. None of above

21. What are the values of shared lock variable?

a. 1, 2

b. 1, 10

c. 0 , 1

d. 1, 11

22. If value of shared lock variable is 1 than,_____.

a. No process in critical section

b. Some process in critical section

c. Other process can enter the critical region

d. None of above

23. If value of shared lock variable is 0 than,_____.

a. No process in critical section

b. Some process in critical section

c. No process can enter the critical region

d. None of above

24. Continuously testing a variable waiting for some value to appear is called the _____.

a. Variable test

b. Context switching

c. Busy waiting

d. None of above

25. Which system call block the caller, that is, be suspended until another process wakes it up?

a. Awake

b. Sleep

c. Lock

d. None of above

26. Which system call wakes up the process?

a. Awake

b. Wakeup

c. Sleep

d. None of above

27. Producer- consumer problem is also known as _____.

a. Procedure consumer problem

b. Bounded-buffer problem

c. A and B both

d. None of above

28. Mutex is the short form for _____.

a. Mutual Exclusive object

b. Mutual Event object

c. Mutual Exclusion Object

d. None of above

29. What is the use of "MOVE MUTEX,#0" instruction?

a. To store a 1 in Mutex

b. To store a 0 in Register

c. To store a 1 in Register

d. To store a 0 in Mutex

30. What is the use of "XCHG REGISTER, LOCK" instruction?

a. Swap the contents of the register and lock variable

b. Set the register value to 0 and lock variable value to 1

c. Compare the contents of the register and lock variable

d. None of above

31. In some application are divided into phases and have that rule that no process may proceed into the next phase until all process completed in this phase and are ready to proceed to the next phase, by which mechanism this behavior is achieved?

a. Mutex

b. Semaphore

c. Monitor

d. Barrier

32. In which mechanism a process disables interrupts before entering the critical section and enables the interrupt immediately after exiting the critical section?

a. Disabling interrupts
b. Shared lock variable
c. Strict alteration
d. Peterson's solution

33. In strict alteration, what is the work of "turn" variable?

a. To disable the interrupts
b. To keeps track of whose turn is to enter the critical section
c. To block the processes

d. None of above

33. What does "leave_region" indicates?

a. Process is done and to allow the other process to enter, if it so desires

b. Process is running and to allow the other process to enter in critical region

c. Process is blocked

d. None of above

34. If any process wants to enter critical region, it calls the _____.

a. enter_criticalregion

b. enter_section

c. enter_region

d. None of above

35. What is the work of producer?

a. Remove information from the buffer

b. Put the information into the buffer

c. Consume information from the buffer

d. None of above

35. What can consumer do?

a. Remove information from the buffer

b. Consume information from the buffer

c. Put the information into the buffer

d. Both A and B

36. What is the use of "insert_item" instruction?

a. It adds an item to the buffer

b. It removes an item from the buffer

c. Both A and B

d. None of above

37. What is the use of "remove_item" instruction?

a. It adds an item to the buffer

b. It removes an item from the buffer

c. Both A and B

d. None of above

38. A_____ is a collection of procedures, variables, and data structures grouped together in a single module or package.

a. Semaphore

b. Bounded buffer

c. Monitor

d. None of above

39. If other process is using monitor, than _____.

a. the calling process may enter

b. the calling process may not enter

c. Both A and B

d. None of above

40. Mutex is a variable that can be _____ states.

a. Unlocked

b. Locked

c. Both A and B

d. None of above

41. Which instruction is used as alternative of TSL?

a. JZN

b. RET

c. MOVE

d. XCHG

42. Which one is not the solution for achieving mutual exclusion using busy waiting?

a. Strict alteration
b. Peterson's solution
c. Exchange instruction
d. Enabling interrupts

43. What is the meaning of send(p1, message)?

a. Send the message to p1

b. p1 sends the message

c. p1 is receiver

d. None of above

44. What is the meaning of receive(p1, message)?

a. Receive the message from p1

b. p1 sends the message

c. p1 is receiver

d. None of above

45. The monitor construct ensures that _____.

a. only one process can be active at a time within the monitor
b. n number of processes can be active at a time within the monitor
c. the queue has only one process in it at a time
d. All of above

46. What are the operations that can be invoked on a condition variable?

a. wait & signal
b. hold & wait
c. signal & hold
d. continue & signal

47. Which of the following two operations are provided by the IPC facility?

a. Write and Delete message

b. Delete and receive message

c. Send and Delete message

d. Send and Receive message

48. Test And Set instruction is executed _____.

a. Periodically

b. After a particular process

c. Atomically

d. At the end of a process

49. Semaphore is a/an _____ to solve the critical section problem.

a. Hardware for a system

b. Special program for a system

c. Integer variable

d. Program

50. The signal operation of the semaphore basically works on the basic _____ system call.

a. continue()

b. wakeup()

c. getup()

d. start()

Unit 4: Deadlocks

1. What is a reusable resource?
   a. That can be used by one process at a time and is not depleted by that use
   b. That can be used by more than one process at a time
   c. That can be shared between various threads
   d. None of above
2. A system is in the safe state if _____.
   a. The system can allocate resources to each process in some order and still avoid a deadlock
   b. There exist a safe sequence
   c. All of above
   d. None of above
3. Which one of the following is the deadlock avoidance algorithm?
   a. Banker's algorithm
   b. Round-robin algorithm
   c. Elevator algorithm
   d. Karn's algorithm
4. For an effective operating system, when to check for deadlock?
   a. Every time a process completes
   b. At fixed time intervals
   c. Every time a resource request is made at fixed time intervals
   d. None of above
5. Which one of the following is a visual way to determine the deadlock occurrence?
   a. Resource allocation graph
   b. Starvation graph
   c. Inversion graph
   d. None of above
6. Which of the following condition is required for a deadlock to be possible?
   a. Mutual exclusion
   b. A process may hold allocated resources while awaiting assignment of other resources
   c. No resource can be forcibly removed from a process holding it
   d. All of the mentioned
7. The circular wait condition can be prevented by _____.
   a. Defining a linear ordering of resource types
   b. Using thread
   c. Using pipes
   d. All of above
8. What is the drawback of banker's algorithm?
   a. In advance processes rarely know how much resource they will need
   b. The number of processes changes as time progresses

c. Resource once available can disappear
d. All of above

9. A problem encountered in multitasking when a process is denied necessary resources is called _____.
   a. Deadlock
   b. Starvation
   c. Inversion
   d. Aging
10. To avoid deadlock _____.
   a. There must be a fixed number of resources to allocate
   b. Resource allocation must be done only once
   c. All deadlocked processes must be aborted
   d. Inversion technique can be used
11. The number of resources requested by a process _____.
   a. Must not exceed the total number of resources available in the system
   b. Must always be equal to the total number of resources available in the system
   c. Must exceed the total number of resources available in the system
   d. None of above
12. For mutual exclusion to be hold n the system _____.
   a. At least one resource must be held in a non sharable mode
   b. The processor must be a uniprocessor rather than a multiprocessor
   c. There must be at least one resource in a sharable mode
   d. All of above
13. Deadlock prevention is a set of methods _____.
   a. To ensure that at least one of the necessary conditions cannot hold
   b. To ensure that all of the necessary conditions do not hold
   c. To decide if the requested resources for a process have to be given or not
   d. To recover from a deadlock
14. The disadvantage of a process being allocated all its resources before beginning its execution is _____.
   a. Low CPU utilization
   b. Low resource utilization
   c. Very high resource utilization
   d. None of above
15. One way to ensure that the circular wait condition never holds is to _____
   a. Impose a total ordering of all resource types and to determine whether one precedes another in the ordering
   b. To never let a process acquire resources that are held by other processes
   c. To let a process wait for only one resource at a time
   d. All of above

16. The request and release of resources are _____.
    a. Command line statements
    b. Interrupts
    c. System calls
    d. Special programs
17. For a hold and wait condition to be hold _____.
    a. A process must be not be holding a resource, but waiting for one to be freed, and then request to acquire it
    b. A process must be holding at least one resource and waiting to acquire additional resources that are being held by other processes
    c. A process must hold at least one resource and not be waiting to acquire additional resources
    d. None of above
18. For non sharable resources like a printer, mutual exclusion _____.
    a. Must exist
    b. Must not exist
    c. May exist
    d. None of above
19. To ensure that the hold and wait condition never occurs in the system, it must be ensured that _____.
    a. Whenever a resource is requested by a process, it is not holding any other resources
    b. Each process must request and be allocated all its resources before it begins its execution
    c. A process can request resources only when it has none
    d. All of above
20. Each request requires that the system consider the _____ to decide whether the current request can be satisfied or must wait to avoid a future possible deadlock.
    a. Resources currently available
    b. Processes that have previously been in the system
    c. Resources currently allocated to each process
    d. Future requests and releases of each process
21. A deadlock avoidance algorithm dynamically examines the _____ to ensure that a circular wait condition can never exist.
    a. Resource allocation state
    b. System storage state
    c. Operating system
    d. Resources
22. A system is in a safe state only if there exists a _____.
    a. Safe allocation
    b. Safe resource

c. Safe sequence
d. All of above

23. A system has 12 magnetic tape drives and 3 processes : P0, P1, and P2. Process P0 requires 10 tape drives, P1 requires 4 and P2 requires 9 tape drives. Currently process P0 has been allocated 5 tape drives, P1 has been allocated 2 tape drives and P2 has been allocated 2 tape drives. Which of the following sequence is a safe sequence?
    a. P0, P1, P2
    b. P1, P2, P0
    c. P2, P0, P1
    d. P1, P0, P2
24. The resource allocation graph is not applicable to a resource allocation system_____.
    a. With multiple instances of each resource type
    b. With a single instance of each resource type
    c. Single & multiple instances of each resource type
    d. None of above
25. The data structures available in the Banker's algorithm are _____.
    a. Available
    b. Need
    c. Allocation
    d. All of above
26. Given a priori information about the _____ number of resources of each type that maybe requested for each process, it is possible to construct an algorithm that ensures that the system will never enter a deadlock state.
    a. Minimum
    b. Average
    c. Maximum
    d. Approximate
27. A state is safe, if _____
    a. The system does not crash due to deadlock occurrence
    b. The system can allocate resources to each process in some order and still avoid a deadlock
    c. The state keeps the system protected and safe
    d. All of above
28. All unsafe states are _____.
    a. Deadlocks
    b. Not deadlocks
    c. Fatal
    d. None of above
29. If no cycle exists in the resource allocation graph _____.
    a. Then the system will not be in a safe state

b. Then the system will be in a safe state
c. All of above
d. None of above

30. The Banker's algorithm is _____ than the resource allocation graph algorithm.
a. Less efficient
b. More efficient
c. Equal
d. None of above

31. The content of the matrix Need is _____.
a. Allocation – Available
b. Max – Available
c. Max – Allocation
d. Allocation – Max

32. The wait-for graph is a deadlock detection algorithm that is applicable when_____.
a. All resources have a single instance
b. All resources have multiple instances
c. All resources have a single 7 multiple instances
d. All of above

33. If the wait for graph contains a cycle _____.
a. Then a deadlock does not exist
b. Then a deadlock exists
c. Then the system is in a safe state
d. Either deadlock exists or system is in a safe state

34. What is the disadvantage of invoking the detection algorithm for every request?
a. Overhead of the detection algorithm due to consumption of memory
b. Excessive time consumed in the request to be allocated memory
c. Considerable overhead in computation time
d. All of above

35. Every time a request for allocation cannot be granted immediately, the detection algorithm is invoked. This will help identify _____.
a. The set of processes that have been deadlocked
b. The set of processes in the deadlock queue
c. The specific process that caused the deadlock
d. All of the mentioned

36. A system has 3 processes sharing 4 resources. If each process needs a maximum of 2 units then, deadlock _____.
a. Can never occur
b. May occur
c. Has to occur
d. None of above

37. An edge from process Pi to Pj in a wait for graph indicates that _____.
    a. Pi is waiting for Pj to release a resource that Pi needs
    b. Pj is waiting for Pi to release a resource that Pj needs
    c. Pi is waiting for Pj to leave the system
    d. Pj is waiting for Pi to leave the system
38. If deadlocks occur frequently, the detection algorithm must be invoked _____.
    a. Rarely
    b. Frequently
    c. Rarely & frequently
    d. None of above
39. A deadlock eventually decrease system throughput and will cause the CPU utilization to _____.
    a. Increase
    b. Drop
    c. Stay still
    d. None of above
40. A deadlock can be broken by _____.
    a. Abort one or more processes to break the circular wait
    b. Abort all the process in the system
    c. Preempt all resources from all processes
    d. None of above
41. To _____ to a safe state, the system needs to keep more information about the states of processes.
    a. Abort the process
    b. Roll back the process
    c. Queue the process
    d. None of above
42. The process to be aborted is chosen on the basis of the following factors?
    a. Priority of the process
    b. Process is interactive or batch
    c. How long the process has computed
    d. All of above
43. If we preempt a resource from a process, the process cannot continue with its normal execution and it must be _____.
    a. Aborted
    b. Rolled back
    c. Terminated
    d. Queued
44. If the resources are always preempted from the same process _____ can occur.
    a. Deadlock

b. System crash
c. Aging
d. Starvation

45. A system has 12 printers and 3 processes: P1, P2, and P3. Process P1 requires 10 tape drives, P2 requires 4 and P3 requires 9 tape drives. Currently process P1 has been allocated 5 printers, P2 has been allocated 2 printers and P3 has been allocated 2 printers. Which of the following sequence is a safe sequence?
    a. P1, P2, P3
    b. P2, P3, P1
    c. P3, P1, P2
    d. P2, P1, P3
46. A _____ is a state in which each member of a group is waiting for another member, including itself, to take action.
    a. Deadlock
    b. Aging
    c. Starvation
    d. None of above

47. What are multithreaded programs?
    a. Lesser prone to deadlocks
    b. More prone to deadlocks
    c. Not at all prone to deadlocks
    d. None of above

48. A computer system has 6 tape drives, with 'n' processes competing for them. Each process may need 3 tape drives. The maximum value of 'n' for which the system is guaranteed to be deadlock free is?
    a. 2 b. 3 c. 4 d.1

49. 'm' processes share 'n' resources of the same type. The maximum need of each process doesn't exceed 'n' and the sum of all their maximum needs is always less than m+n. In this setup, deadlock _____.
    a. Can never occur
    b. May occur
    c. Has to occur
    d. None of above

50. Which of the following is the strategy to handle deadlock?

    a. Deadlock avoidance
    b. Deadlock prevention
    c. Deadlock detection
    d. All of above

Unit 5: Memory Management

1. CPU fetches the instruction from memory according to the values of_____.
    a. Program counter
    b. Status register
    c. Instruction register
    d. Program status word
2. Which one of the following is the address generated by CPU?
    a. Physical address
    b. Absolute address
    c. Logical address
    d. Trial address
3. Run time mapping from virtual to physical address is done by_____.
    a. Memory management unit
    b. CPU
    c. Address translator
    d. ALU
4. Memory management technique in which system stores and retrieves data from secondary storage for use in memory is called?
    a. Fragmentation
    b. Paging
    c. Mapping
    d. None of above
5. Program always deals with _____.
    a. Logical address
    b. Absolute address
    c. Physical address
    d. Relative address
6. The page table contains _____.
    a. Page offset
    b. Page size
    c. Base address of each page in physical memory
    d. None of above
7. Operating system maintains the page table for _____.
    a. Each process
    b. Each thread
    c. Each instruction
    d. Each address
8. Who swaps processes in and out of the memory?
    a. CPU
    b. HDD

c. User
d. Memory manager

9. The address loaded into the memory address register of the memory is referred to as _____.
    a. Physical address
    b. Logical address
    c. a and b both
    d. None of above
10. In contiguous memory allocation _____.
    a. Each process is contained in a single contiguous section of memory
    b. All processes are contained in a single contiguous section of memory
    c. The memory space is contiguous
    d. None of above
11. When memory is divided into several fixed sized partitions, each partition may contain _____.
    a. At least one process
    b. Multiple processes at once
    c. Exactly one process
    d. None of above
12. The first fit, best fit and worst fit are strategies to select a _____.
    a. Process from a queue to put in memory
    b. Free hole from a set of available holes
    c. Processor to run the next process
    d. All of above
13. Physical memory is broken into fixed-sized blocks called _____.
    a. Pages
    b. Sectors
    c. Files
    d. Frames
14. The virtual address space is divided into equally sized partitions is called _____.
    a. Frames
    b. Pages
    c. Sectors
    d. Files
15. The _____is used as index into the page table.
    a. Virtual page number
    b. Virtual index number
    c. Virtual frame number
    d. None of above

16. With paging there is no _____ fragmentation.
    a. Internal
    b. External
    c. Both a and b
    d. None of above
17. When there is a large logical address space, the best way of paging would be _____.
    a. Not to page
    b. A two level paging algorithm
    c. The page table itself
    d. All of above
18. The protection bit is 0/1 based one _____.
    a. Write only
    b. Read only
    c. Read – Write
    d. None of above
19. Memory loss is less in _____ memory allocation method.
    a. First fit
    b. Best fit
    c. Next fit
    d. Worst fit
20. The set of pages that a process is currently using is known as _____.
    a. Working set
    b. Current set
    c. Using set
    d. None of above
21. What is the full form of TLB?
    a. Transfer Lookaside Buffer
    b. Translation Lookinside Buffer
    c. Translation Lookaside Buffer
    d. None of above
22. Reference bit is used for _____.
    a. Implementing LRU page replacement algorithm
    b. Implementing NRU algorithm
    c. Implementing optimal algorithm
    d. All of above
23. The LRU algorithm_____.
    a. Pages out pages that have been used recently
    b. Pages out pages that have not been used recently
    c. Pages out pages that have been least used recently

d. Pages out the first page in a given area

24. The optimal page replacement algorithm will select the page that _____.
    a. Has been used least number of times
    b. Has been used most numbers of times
    c. Has been used for the longest time in the past
    d. Will not used for the longest time in future
25. Consider a reference string:
    2, 1, 3, 2, 4, 5, 6, 1, 2, 3 of frame size 3.
    Using FIFO algorithm, determine the number of page faults.
    a. 8
    b. 9
    c. 13
    d. 14
26. Consider a reference string:
    2, 1, 3, 2, 4, 5, 6, 1, 2, 3 of frame size 3.

    Using LRU page replacement algorithm, determine the number of page faults.

    a. 8
    b. 9
    c. 10
    d. 11
27. Consider a reference string:
    2, 1, 3, 2, 4, 5, 6, 1, 2, 3 of frame size 3.

    Using optimal page replacement algorithm, determine the number of page faults.

    a. 7
    b. 8
    c. 9
    d. 10
28. What is the full form of LRU?
    a. Last Replace Unit
    b. Last Restore Unit
    c. Least Recently Used
    d. Least Required Unit
29. Which amongst the following is not a valid page replacement policy?
    a. Least Recently Used policy
    b. First in first out policy
    c. Recurrently used policy
    d. Optimal page replacement policy

30. Memory management technique in which system stores and retrieve data from secondary storage for use in main memory is called?
    a. Fragmentation
    b. Paging
    c. Mapping
    d. None of above
31. A memory page containing a heavily used variable that was initialized very early and is in constant use is removed, then the page replacement algorithm used is _____.
    a. LRU
    b. LFU
    c. FIFO
    d. None of above
32. The part of the operating system that manages (part of) the memory hierarchy is called _____.
    a. Memory manager
    b. Hierarchy manager
    c. System manager
    d. None of above
33. _____ is a data structure which translates virtual address into equivalent physical address.
    a. Page fault
    b. Page table
    c. Page frame
    d. None of above
34. Which field shows the corresponding physical page frame number for a particular web page?
    a. Frame number
    b. Webpage number
    c. Page number
    d. Page frame number
35. The event of copying process from hard disk to main memory is called as _____.
    a. Swapped-in
    b. Swapped-out
    c. Swap
    d. None of above
36. The event of copying process from main memory to hard disk is called as _____.
    a. Swapped-in
    b. Swapped-out
    c. Swap
    d. None of above

37. What is the full form of MMU?
    a. Memory Management Unit
    b. Main Memory Unit
    c. Memory Manage Unit
    d. None of above
38. Consider a reference string:
    2, 3, 4, 2, 1, 3, 7, 5, 4, 3 of frame size 3.

    Using LRU page replacement algorithm, determine the number of page faults.

    a. 6
    b. 7
    c. 10
    d. 11
39. Consider a reference string:
    1, 3, 0, 3, 5, 6 of frame size 3.

    Using FIFO page replacement algorithm, determine the number of page faults.

    a. 6
    b. 7
    c. 10
    d. 11
40. Consider a reference string:
    7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2 of frame size 4.

    Using optimal page replacement algorithm, determine the number of page faults.

    a. 6
    b. 7
    c. 10
    d. 11
41. Virtual memory is _____.
    a. Large secondary memory
    b. Large main memory
    c. Illusion of large main memory
    d. None of above
42. Page fault occurs _____.
    a. When a requested page is in memory
    b. When a requested page is not in memory
    c. When a page is corrupted
    d. When an exception throw
43. Address binding is _____.

a. Going to an address in memory
b. Locating an address with the help of another address
c. Binding two addresses together to form a new address in a different memory space
d. A mapping from one address space to another

44. Binding of instruction and data to memory addresses can be done at:
a. Compile time
b. Load time
c. Execution time
d. All of above

45. The size of a process is limited to the size of:
a. Physical memory
b. External storage
c. Secondary storage
d. None of above

46. Swapping requires a_____.
a. Motherboard
b. Keyboard
c. Monitor
d. Backing store

47. A memory buffer used to accommodate a speed differential is called _____.
a. Stack pointer
b. Cache
c. Accumulator
d. Disk buffer

48. In fixed size partition, the degree of multiprogramming is bounded by_____.
a. The number of partitions
b. The CPU utilization
c. The memory size
d. All of above

49. _____ is generally faster than _____ and _____.
a. First fit, best fit and worst fit
b. Best fit, first fit and worst fit
c. Worst fit, best fit and first fit
d. None of above

50. Every address generated by the CPU is divided into two parts_____ and _____.
a. Frame bit and page number
b. Page number and page offset
c. Page offset and frame bit
d. Frame offset and page offset

Unit 6: File Systems

1. _____ is a unique tag, usually a number identifies the file within the file system.
   a. File identifier
   b. File name
   c. File type
   d. None of the mentioned
2. By using the specific system call, we can _____.
   a. Open the file
   b. Read the file
   c. Write into the file
   d. All of above
3. Which file is a sequence of bytes organized into blocks understandable by the system's linker?
   a. Object file
   b. Source file
   c. Executable file
   d. Text file
4. Mapping of file is managed by _____.
   a. File metadata
   b. Page table
   c. Virtual memory
   d. File system
5. Which one of the following explains the sequential file access method?
   a. Random access according to the given byte number
   b. Read bytes one at a time, in order
   c. Read/write sequentially by record
   d. Read/write randomly by record
6. To create a file _____.
   a. Allocate the space in file system
   b. Make an entry for new file in directory
   c. Allocate the space in file system & make an entry for new file in directory
   d. None of above
7. File type can be represented by _____.
   a. File name
   b. File extension
   c. File identifier
   d. None of above
8. What is the mounting of file system?
   a. Crating of a file system
   b Deleting a file system

c. Attaching portion of the file system into a directory structure
d. Removing the portion of the file system into a directory structure

9. When will file system fragmentation occur?
   a. Unused space or single file are not contiguous
   b. Used space is not contiguous
   c. Unused space is non-contiguous
   d. Multiple files are non-contiguous
10. Management of metadata information is done by _____.
   a. File-organization module
   b. Logical file system
   c. Basic file system
   d. Application programs
11. What will happen when a process closes the file?
   a. Per-process table entry is not removed
   b. System wide entry's open count is decremented
   c. All of above
   d. None of above
12. The data structure used for file directory is called _____.
   a. Mount table
   b. Hash table
   c. File table
   d. Process table
13. A file control block contains the information about _____.
   a. File ownership
   b. File permissions
   c. Location of file contents
   d. All of above
14. To create a new file, application program calls _____.
   a. Basic file system
   b. Logical file system
   c. File-organization module
   d. None of above
15. In which type of allocation method each file occupy a set of contiguous block on the disk?
   a. Contiguous allocation
   b. Dynamic-storage allocation
   c. Linked allocation
   d. Indexed allocation
16. Data cannot be written to secondary storage unless written within a _____.
   a. File

b. Swap space
c. Directory
d. Text format

17. The information about all files is kept in _____.
    a. Swap space
    b. Operating system
    c. Separate directory structure
    d. None of above
18. The operating system keeps a small table containing information about all open files called _____.
    a. System table
    b. Open-file table
    c. File table
    d. Directory table
19. Which of the following are the two parts of the file name?
    a. Name & identifier
    b. Identifier & type
    c. Extension & name
    d. Type & extension
20. File attributes consist of _____.
    a. Name
    b. Type
    c. Identifier
    d. All of above
21. A file is a/an _____ data type.
    a. Abstract
    b. Primitive
    c. Public
    d. Private
22. In the sequential access method, information in the file is processed _____.
    a. One disk after the other, record access doesn't matter
    b. One record after the other
    c. One text document after the other
    d. None of above
23. The direct access method is based on a _____ model of a file.
    a. Magnetic tape
    b. Tape
    c. Disk
    d. All of above

24. The larger the block size, the _____ the internal fragmentation.
    a. Greater
    b. Lesser
    c. Same
    d. None of above
25. For a direct access file _____.
    a. There are restrictions on the order of reading and writing
    b. There are no restrictions on the order of reading and writing
    c. Access is restricted permission wise
    d. Access is not restricted permission wise
26. The index contains _____.
    a. Names of all contents of file
    b. Pointers to each page
    c. Pointers to the various blocks
    d. All of above
27. What will happen in the single level directory?
    a. All files are contained in different directories all at the same level
    b. All files are contained in the same directory
    c. Depends on the operating system
    d. None of above
28. What will happen in the two level directory structure?
    a. Each user has his/her own user file directory
    b. The system doesn't its own master file directory
    c. All of above
    d. None of above
29. In the tree structured directories _____.
    a. The tree has the stem directory
    b. The tree has the leaf directory
    c. The tree has the root directory
    d. All of above
30. Which of the following are the types of Path names?
    a. Absolute and relative
    b. Local and global
    c. Global and relative
    d. Relative and local
31. What is true for the single level directory?
    a. All directories must have unique names
    b. All files must have unique names
    c. All files must have unique owners
    d. All of above

32. What is the disadvantage of the two level directory structure?
    a. It does not solve the name collision problem
    b. It solves the name collision problem
    c. It does not isolate users from one another
    d. It isolates users from one another
33. An absolute path name begins at the _____.
    a. Leaf
    b. Stem
    c. Current directory
    d. Root
34. In a tree structure, when deleting a directory that is not empty?
    a. The contents of the directory are safe
    b. The contents of the directory are also deleted
    c. Contents of the directory are not deleted
    d. None of above
35. A tree structure _____ the sharing of files and directories.
    a. Allows
    b. Does not affect
    c. Restricts
    d. None of above
36. A relative path name begins at the _____.
    a. Leaf
    b. Stem
    c. Current directory
    d. Root
37. When two users keep a subdirectory in their own directories, the structure being referred to is _____.
    a. Tree structure
    b. Cyclic graph directory structure
    c. Two level directory structure
    d. Acyclic graph directory
38. With a shared file _____.
    a. Actual file exists
    b. There are two copies of the file
    c. The changes made by one person are not reflected to the other
    d. The changes made by one person are reflected to the other
39. The three major methods of allocating disk space that are in wide use are _____.
    a. Contiguous
    b. Linked

c. Indexed
d. All of above

40. In linked allocation _____.
    a. Each file must occupy a set of contiguous blocks on the disk
    b. Each file is a linked list of disk blocks
    c. All the pointers to scattered blocks are placed together in one location
    d. None of above
41. On systems where there are multiple operating system, the decision to load a particular one is done by _____.
    a. Boot loader
    b. Bootstrap
    c. Process control block
    d. File control block
42. What is the real disadvantage of a linear list of directory entries?
    a. Size of the linear list in memory
    b. Linear search to find a file
    c. It is not reliable
    d. All of above
43. One difficulty of contiguous allocation is _____.
    a. Finding space for a new file
    b. Inefficient
    c. Costly
    d. Time taking
44. If too little space is allocated to a file then_____.
    a. The file will not work
    b. There will not be any space for the data, as the FCB takes it all
    c. The file cannot be extended
    d. The file cannot be opened
45. In contiguous allocation _____.
    a. Each file must occupy a set of contiguous blocks on the disk
    b. Each file is a linked list of disk blocks
    c. All the pointers to scattered blocks are placed together in one location
    d. None of above
46. In indexed allocation _____.
    a. Each file must occupy a set of contiguous blocks on the disk
    b. Each file is a linked list of disk blocks
    c. All the pointers to scattered blocks are placed together in one location
    d. None of above
47. Contiguous allocation of a file is defined by _____.
    a. Disk address of the first block & length

b. Length & size of the block
c. Size of the block

d. None of above

48. In the linked allocation, the directory contains a pointer to which block?
    I. First block
    II. last block
    a. I only
    b. II only
    c. Both I and II
    d. Neither I nor II
49. There is no _____ with linked allocation.
    a. Internal fragmentation
    b. External fragmentation
    c. Starvation
    d. All of above
50. What is the major disadvantage with a linked allocation?
    a. Internal fragmentation
    b. External fragmentation
    c. There is no sequential access
    d. There is only sequential access