1. 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 the mentioned

2. To access the services of operating system, the interface is provided by the:

- A. system calls
- B. API
- C. library
- D. assembly instructions

3. Which one of the following is not true?

- A. kernel is the program that constitutes the central core of the operating system
- B. kernel is the first part of operating system to load into memory during booting
- C. kernel is made of various modules which can not be loaded in running operating system
- D. kernel remains in the memory during the entire computer session

4. Which one 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 the mentioned

5. The main function of the command interpreter is:

- 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 the mentioned

6. By operating system, the resource management can be done via:

- A. time division multiplexing
- B. space division multiplexing
- C. both (a) and (b)
- D. none of the mentioned

7. If a process fails, most operating system write the error information to a:

- A. log file

- **B.** another running process
- **C.** new file
- **D.** none of the mentioned

8. The systems which allows only one process execution at a time, are called:

- **A.** uniprogramming systems
- **B.** uniprocessing systems
- **C.** unitasking systems
- **D.** none of the mentioned

9. In operating system, each process has its own:

- **A.** address space and global variables
- **B.** open files
- **C.** pending alarms, signals and signal handlers
- **D.** all of the mentioned

10. In Unix, Which system call creates the new process?

- **A.** fork
- **B.** create
- **C.** new
- **D.** none of the mentioned

11. A process can be terminated due to:

- **A.** normal exit
- **B.** fatal error
- **C.** killed by another process
- **D.** all of the mentioned

12. What is the ready state of a process?

- **A.** when process is scheduled to run after some execution
- **B.** when process is unable to run until some task has been completed
- **C.** when process is using the CPU
- **D.** none of the mentioned

13. What is interprocess communication?

- **A.** communication within the process
- **B.** communication between two process
- **C.** communication between two threads of same process
- **D.** none of the mentioned

14. A set of processes is deadlock if:

- A. each process is blocked and will remain so forever
- B. each process is terminated
- C. all processes are trying to kill each other
- D. none of the mentioned

15. A process stack does not contain:

- A. function parameters
- B. local variables
- C. return addresses
- D. PID of child process

16. Which system call returns the process identifier of a terminated child?

- A. wait
- B. exit
- C. fork
- D. get

17. The address of the next instruction to be executed by the current process is provided by the:

- A. CPU registers
- B. program counter
- C. process stack
- D. pipe

18. A Process Control Block(PCB) does not contain which of the following :

- A. code
- B. stack
- C. Process State
- D. I/O status information
- E. bootstrap program

19. The number of processes completed per unit time is known as _____.

- A. output
- B. Throughput
- C. Efficiency
- D. Capacity

20. The state of a process is defined by :

- A. the final activity of the process

- **B.** the activity just executed by the process
- **C.** the activity to next be executed by the process
- **D.** <mark>the current activity of the process</mark>

21. Which of the following is not the state of a process ?

- **A.** new
- **B.** <mark>old</mark>
- **C.** Waiting
- **D.** Running
- **E.** Terminated

22. The Process Control Block is :

- **A.** Process type variable
- **B.** <mark>Data Structure</mark>
- **C.** a secondary storage section
- **D.** a Block in memory

23. The entry of all the PCBs of the current processes is in :

- **A.** Process Register
- **B.** Program Counter
- **C.** <mark>Process Table</mark>
- **D.** Process Unit

24. The degree of multi-programming is :

- **A.** the number of processes executed per unit time
- **B.** the number of processes in the ready queue
- **C.** the number of processes in the I/O queue
- **D.** <mark>the number of processes in memory</mark>

25. A single thread of control allows the process to perform :

- **A.** <mark>only one task at a time</mark>
- **B.** multiple tasks at a time
- **C.** All of these

26. Which of the following do not belong to queues for processes ?

- **A.** <mark>Job Queue</mark>
- **B.** PCB queue
- **C.** Device Queue
- **D.** Ready Queue

27. When the process issues an I/O request :

- A. It is placed in an I/O queue
- B. It is placed in a waiting queue
- C. It is placed in the ready queue
- D. It is placed in the Job queue

28. Which one of the following is not shared by threads?

- A. program counter
- B. stack
- C. both (a) and (b)
- D. none of the mentioned

29. A process can be:

- A. single threaded
- B. multithreaded
- C. both (a) and (b)
- D. none of the mentioned

30. If one thread opens a file with read privileges then:

- A. other threads in the another process can also read from that file
- B. other threads in the same process can also read from that file
- C. any other thread can not read from that file
- D. all of the mentioned

31. The time required to create a new thread in an existing process is:

- A. greater than the time required to create a new process
- B. less than the time required to create a new process
- C. equal to the time required to create a new process
- D. none of the mentioned

32. When the event for which a thread is blocked occurs,

- A. thread moves to the ready queue
- B. thread remains blocked
- C. thread completes
- D. a new thread is provided

33. Termination of the process terminates:

- A. first thread of the process
- B. first two threads of the process

- C. all threads within the process
- D. no thread within the process

34. Which one of the following is not a valid state of a thread?

- A. running
- B. parsing
- C. ready
- D. blocked

35. The register context and stacks of a thread are deallocated when the thread:

- A. terminated
- B. blocks
- C. unblocks
- D. spawns

36. Thread synchronization is required because:

- A. all threads of a process share the same address space
- B. all threads of a process share the same global variables
- C. all threads of a process can share the same files
- D. all of the mentioned

37. Which module gives control of the CPU to the process selected by the short-term scheduler?

- A. dispatcher
- B. interrupt
- C. scheduler
- D. none of the mentioned

38. 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

39. 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

40. 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 the mentioned

41. 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 the mentioned

42. 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

43. Time quantum is defined in:

- A. shortest job scheduling algorithm
- B. round robin scheduling algorithm
- C. priority scheduling algorithm
- D. multilevel queue scheduling algorithm

44. Process are classified into different groups in:

- A. shortest job scheduling algorithm
- B. round robin scheduling algorithm
- C. priority scheduling algorithm
- D. multilevel queue scheduling algorithm

45. In multilevel feedback scheduling algorithm:

- A. a process can move to a different classified ready queue
- B. classification of ready queue is permanent
- C. processes are not classified into groups
- D. none of the mentioned

46. 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 the mentioned

47. What is the 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 the mentioned

48. Which of the following condition is required for 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

49. 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. both (a) and (b)
- D. none of the mentioned

50. 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 the mentioned

51. 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

●●

1. The main memory accommodates:

a) operating system   b) cpu

c) user processes   d) all of the mentioned

2. 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 the mentioned

3. The relocation (base) register helps in :

a) providing more address space to processes

b) a different address space to processes

c) to protect the address spaces of processes

d) none of the mentioned

4. With relocation and limit registers, each logical address must be _____ the limit register.

a) less than   b) equal to

c) greater than   d) none of the mentioned

5. The operating system and the other processes are protected from being modified by an already running process because :

a) they are in different memory spaces

b) they are in different logical addresses

c) they have a protection algorithm

d) every address generated by the CPU is being checked against the relocation and limit registers

6. **When memory is divided into several fixed sized partitions, each partition may contain _____**

a) exactly one process   b) at least one process

c) multiple processes at once   d) none of the mentioned

7. 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 the mentioned

8. The first fit, best fit and worst fit are strategies to select a __

a) process from a queue to put in memory

b) processor to run the next process

c) free hole from a set of available holes

d) all of the mentioned

9. In internal fragmentation, memory is internal to a partition and:

a) is being used   b) is not being used

c) is always used   d) none of the mentioned

10. A solution to the problem of external fragmentation is:

a) compaction   b) larger memory space

c) smaller memory space   d) none of the mentioned

11. Another solution to the problem of external fragmentation problem is to:

a) permit the logical address space of a process to be noncontiguous

b) permit smaller processes to be allocated memory at last

c) permit larger processes to be allocated memory at last

d) all of the mentioned

12. If relocation is static and is done at assembly or load time, compaction _____

a) cannot be done   b) must be done

c) must not be done   d) can be done

13. The disadvantage of moving all process to one end of memory and all holes to the other direction, producing one large hole of availablaae memory is:

a) the cost incurred   b) the memory used

c) the CPU used   d) all of the mentioned

14. _____ is generally faster than _____ and _____

a) first fit, best fit, worst fit.   b) best fit , first fit, worst fit

c) worst fit, best fit, first fit   d) none of the mentioned

15. External fragmentation exists when:

a) enough total memory exists to satisfy a request but not contiguous

b) the total memory is insufficient to satisfy a request

c) a request cannot be satisfied even when the total memory is free

d) none of the mentioned

16. **External fragmentation will not occur when:**

a) first fit is used

b) best fit is used

c) worst fit is used

d) no matter which algorithm used, it always occur

17. **Sometimes the overhead of keeping track of a hole might be:**

a) larger than the memory

b) larger than the hole itself

c) very small

d) all of the mentioned

18. **When the memory allocated to a process is slightly larger than the process, then:**

a) internal fragmentation occurs

b) external fragmentation occurs

c) both internal and external fragmentation occurs

d) neither internal nor external fragmentation occurs

19. **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

20. **Binding of instructions and data to memory addresses can be done at :**

a) Compile time

b) Load time

c) Execution time

d) All of the mentioned

21. **If the process can be moved during its execution from one memory segment to another, then binding must be :**

a) delayed until run time

b) preponed to compile time

c) preponed to load time

d) none of the mentioned

22. **Dynamic loading is :**

a) loading multiple routines dynamically

b) loading a routine only when it is called

c) loading multiple routines randomly

d) none of the mentioned

23. **The advantage of dynamic loading is that :**

a) A used routine is used multiple times

b) An unused routine is never loaded

c) CPU utilization increases

d) All of the mentioned

24. **The _____ swaps processes in and out of the memory**.

a) <mark>Memory manager</mark>　　　　　　b) CPU

c) CPU manager　　　　　　　　　d) User

25. **If a higher priority process arrives and wants service, the memory manager can swap out the lower priority process to execute the higher priority process. This swapping is called :**

a) priority swapping　　　　　　b) pull out, push in

c) <mark>roll out, roll in</mark>　　　　　　d) none of the mentioned

26. **If binding is done at assembly or load time, then the process _____ be moved to different locations after being swapped out and in again.**

a) can　　　　　　　　　　b) must

c) <mark>can never</mark>　　　　　　d) may

27. **In a system that does not support swapping,**

a) <mark>the compiler normally binds symbolic addresses to relocatable addresses</mark>

b) the compiler normally binds symbolic addresses to physical addresses

c) the loader binds relocatable addresses to physical addresses

d) binding of symbolic addresses to physical addresses normally takes place during execution

28. **The address generated by the CPU is referred to as :**

a) Physical address　　　　　　　　b) <mark>Logical address</mark>

c) Neither physical nor logical　　　　d) None of the mentioned

29**. The address loaded into the memory address register of the memory is referred to as :**

a) <mark>Physical address</mark>　　　　　　b) Logical address

c) Neither physical nor logical　　　d) None of the mentioned

30. **The run time mapping from virtual to physical addresses is done by a hardware device called the :**

a) Virtual to physical mapper　　　　　　b) <mark>Memory management unit</mark>

c) Memory mapping unit　　　　　　　　d) None of the mentioned

31. **The base register is also known as the :**

a) basic register　　　　　　　　b) regular register

c) <mark>relocation register</mark>　　　　　d) delocation register

32. **The size of a process is limited to the size of :**

a) **physical memory**   b) external storage

c) secondary storage   d) none of the mentioned

33. **If execution time binding is being used, then a process_____ be swapped to a different memory space.**

a) has to be   b) can never

c) must   d) **may**

34. **Swapping requires a _____**

a) motherboard   b) keyboard

c) monitor   d) **backing store**

35. **The backing store is generally a :**

a) fast disk

b) disk large enough to accommodate copies of all memory images for all users

c) disk to provide direct access to the memory images

d) **all of the mentioned**

36. **The _____ consists of all processes whose memory images are in the backing store or in memory and are ready to run.**

a) wait queue   b) **ready queue**

c) cpu   d) secondary storage

37. **The _____ time in a swap out of a running process and swap in of a new process into the memory is very high.**

a) **context – switch**   b) waiting

c) execution   d) all of the mentioned

38. **The major part of swap time is _____ time.**

a) waiting   b) **transfer**

c) execution   d) none of the mentioned

39. **Swapping _____ be done when a process has pending I/O, or has to execute I/O operations only into operating system buffers.**

a) must   b) can

c) **must never.**   d) may be

41. **Swap space is allocated :**

a) as a chunk of disk   b) separate from a file system

c) into a file system

42. **CPU fetches the instruction from memory according to the value of**

a) program counter   b) status register

c) instruction register   d) program status word

43. **A memory buffer used to accommodate a speed differential is called**

a) stack pointer   b) cache

c) accumulator   d) disk buffer

44. **Which one of the following is the address generated by CPU?**

a) physical address   b) absolute address

c) logical address   d) none of the mentioned

45. **Run time mapping from virtual to physical address is done by**

a) Memory management unit   b) CPU

c) PCI   d) None of the mentioned

46. **Memory management technique in which system stores and retrieves data from secondary storage for use in main memory is called**

a) fragmentation   b) paging

c) mapping   d) none of the mentioned

47. **The address of a page table in memory is pointed by**

a) stack pointer   b) page table base register

c) page register   d) program counter

48. **Program always deals with**

a) logical address   b) absolute address

c) physical address   d) relative address

49. **The page table contains**

a) base address of each page in physical memory   b) page offset

c) page size   d) none of the mentioned