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1. A Process Control Block(PCB) does not contain which of the following?

a) Code

b) Stack

c) Bootstrap program

d) Data

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

a) Output

b) Throughput

c) Efficiency

d) Capacity

3. 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) the current activity of the process

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

a) New

b) Old

c) Waiting

d) Running

5. What is a Process Control Block?

a) Process type variable

b) Data Structure

c) A secondary storage section

d) A Block in memory

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6. The entry of all the PCBs of the current processes is in _____

a) Process Register

b) Program Counter

c) Process Table

d) Process Unit

7. What is the degree of multiprogramming?

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) the number of processes in memory

8. A single thread of control allows the process to perform _____

a) only one task at a time

b) multiple tasks at a time

c) only two tasks at a time

d) all of the mentioned

9) The OS maintains all PCBs in?

A. Process Scheduling Queues

B. Job queue

C. Ready queue

D. Device queues

10. The processes which are blocked due to unavailability of an I/O device constitute this queue.

A. Process Scheduling Queues

B. Job queue

C. Ready queue

D. Device queues

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11) Two-state process model refers to?

A. running states

B. non-running states

C. Both A and B

D. None of the above

12.Which is not a type of Schedulers?

A. Long-Term Scheduler

B. Short-Term Scheduler

C. Medium-Term Scheduler

D. None of the above

13.Which scheduler is also called a job scheduler?

A. Long-Term Scheduler

B. Short-Term Scheduler

C. Medium-Term Scheduler

D. All of the above

14.When the suspended process is moved to the secondary storage. This process is called?

A. process mix.

B. swapping

C. Swap-In

D. Swap-Out

15.Which scheduler Speed is fastest?

A. Long-Term Scheduler

B. Short-Term Scheduler

C. Medium-Term Scheduler

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D. Swapping

16.Which Schedular is a part of Time sharing systems?

A. Long-Term Scheduler

B. Short-Term Scheduler

C. Medium-Term Scheduler

D. Swapping

17.A_____ is the mechanism to store and restore the state

A. PCB

B. Program Counter

C. Scheduling information

D. context switch

18. 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 the mentioned

19. 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

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

a) write & delete message

b) delete & receive message

c) send & delete message

d) receive & send message

21. 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 the mentioned

22. The link between two processes P and Q to send and receive messages is called _____

a) communication link

b) message-passing link

c) synchronization link

d) all of the mentioned

23. Which of the following are TRUE for direct communication?

a) A communication link can be associated with N number of process(N = max. number of processes supported by system)

b) A communication link can be associated with exactly two processes

c) Exactly N/2 links exist between each pair of processes(N = max. number of processes supported by system)

d) Exactly two link exists between each pair of processes

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24. In indirect communication between processes P and Q _____

a) there is another process R to handle and pass on the messages between P and Q

b) there is another machine between the two processes to help communication

c) there is a mailbox to help communication between P and Q

d) none of the mentioned

25. Bounded capacity and Unbounded capacity queues are referred to as _____

a) Programmed buffering

b) Automatic buffering

c) User defined buffering

d) No buffering

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

a) program counter

b) stack

c) both program counter and stack

d) none of the mentioned

27. A process can be _____

a) single threaded

b) multithreaded

c) both single threaded and multithreaded

d) none of the mentioned

28. 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

28. 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

29 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

30.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

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

a) running

b) parsing

c) ready

d) blocked

32 The register context and stacks of a thread are deallocated when the thread?

a) terminates

b) blocks

c) unblocks

d) spawns

33.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

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

a) program counter

b) stack

c) both program counter and stack

d) none of the mentioned

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35.A process can be _____

a) single threaded

b) multithreaded

c) both single threaded and multithreaded

d) none of the mentioned

36.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

37.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

38.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

39 BIOS is used?

By operating system

By compiler

By interpreter

By application softwar

40. A thread is also called _____
a) Light Weight Process(LWP)
b) Heavy Weight Process(HWP)
c) Process
d) None of the mentioned

41 .A thread shares its resources(like data section, code section, open files, signals) with _____
a) other process similar to the one that the thread belongs to
b) other threads that belong to similar processes
c) other threads that belong to the same process
d) all of the mentioned

42.A heavy weight process _____
a) has multiple threads of execution
b) has a single thread of execution
c) can have multiple or a single thread for execution
d) none of the mentioned

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43 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

44. 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 mentione

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

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

46. A process can be terminated due to:

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

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47. 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

48. 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

49. 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

50. A process stack does not contain:

- **A.** function parameters
- **B.** local variables
- **C.** return addresses

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- **D.** PID of child process

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

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

52. 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

53. . 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

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

- **A.** output
- **B.** Throughput

- **C.** Efficiency
- **D.** Capacity

55. 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.** the current activity of the process

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

- **A.** new
- **B.** old
- **C.** Waiting
- **D.** Running
- **E.** Terminate

57. The Process Control Block is :

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

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

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- **A.** Process Register
- **B.** Program Counter
- **C.** Process Table
- **D.** Process Unit

59. 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.** the number of processes in memory

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

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

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

- **A.** Job Queue
- **B.** PCB queue
- **C.** Device Queue
- **D.** Ready Queue

62 When the process issues an I/O request :

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- **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

63 What is a long-term scheduler ?

- **A.** It selects which process has to be brought into the ready queue
- **B.** It selects which process has to be executed next and allocates CPU
- **C.** It selects which process to remove from memory by swapping
- **D.** No

64 .If all processes I/O bound, the ready queue will almost always be _____, and the Short term Scheduler will have a _____ to do.

- **A.** full,little
- **B.** full,lot
- **C.** empty,little
- **D.** empty,lot

65 . What is a medium-term scheduler ?

- **A.** It selects which process has to be brought into the ready queue
- **B.** It selects which process has to be executed next and allocates CPU
- **C.** It selects which process to remove from memory by swapping
- **D.** None of these

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66 . What is a short-term scheduler ?

- **A.** It selects which process has to be brought into the ready queue
- **B.** It selects which process has to be executed next and allocates CPU
- **C.** It selects which process to remove from memory by swapping
- **D.** None of these

67 The primary distinction between the short term scheduler and the long term scheduler is :

- **A.** The length of their queues
- **B.** The type of processes they schedule
- **C.** The frequency of their execution
- **D.** None of these

68 The only state transition that is initiated by the user process itself is :

- **A.** block
- **B.** wakeup
- **C.** dispatch
- **D.** None of these

69 In a time-sharing operating system, when the time slot given to a process is completed, the process goes from the running state to the :

- **A.** Blocked state
- **B.** Ready state
- **C.** Suspended state

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- **D.** Terminated state

70 In a multi-programming environment :

- **A.** the processor executes more than one process at a time
- **B.** the programs are developed by more than one person
- **C.** more than one process resides in the memory
- **D.** a single user can execute many programs at the same time

71. Suppose that a process is in "Blocked" state waiting for some I/O service. When the service is completed, it goes to the :

- **A.** Running state
- **B.** Ready state
- **C.** Suspended state
- **D.** Terminated state

72 .The context of a process in the PCB of a process does not contain :

- **A.** the value of the CPU registers
- **B.** the process state
- **C.** memory-management information
- **D.** context switch time

73 .Which of the following does not interrupt a running process ?

- **A.** A device
- **B.** Timer

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- **C.** Scheduler process
- **D.** Power failure

74 .Several processes access and manipulate the same data concurrently and the outcome of the execution depends on the particular order in which the access takes place, is called a(n) ____.

- **A.** Shared Memory Segments
- **B.** Entry Section
- **C.** Race condition
- **D.** Process Synchronization

. 75 . Which of the following state transitions is not possible ?

- **A.** blocked to running
- **B.** ready to running
- **C.** blocked to ready
- **D.** running to blocked

76 . Which of the following is not a characteristic of virus ?

- **A.** Virus destroy and modify user data
- **B.** Virus is a standalone program
- **C.** Virus is a code embedded in a legitimate program
- **D.** Virus cannot be detected.

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77 .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

78 .A process can be:

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

78 .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

79 .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

. 80 .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

81 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

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

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

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

- **A.** terminated
- **B.** blocks

- **C.** unblocks
- **D.** spawns

84 . 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

85 .A thread is also called :

- **A.** Light Weight Process(LWP)
- **B.** Heavy Weight Process(HWP)
- **C.** process
- **D.** None of these

86 .A thread shares its resources(like data section, code section, open files, signals) with :

- **A.** other process similar to the one that the thread belongs to
- **B.** other threads that belong to similar processes
- **C.** other threads that belong to the same process
- **D.** All of these

87 .A heavy weight process :

- **A.** has multiple threads of execution
- **B.** has a single thread of execution
- **C.** can have multiple or a single thread for execution
- **D.** None of these

89 . process having multiple threads of control implies :

- **A.** it can do more than one task at a time
- **B.** it can do only one task at a time, but much faster
- **C.** it has to use only one thread per process
- **D.** None of these

90. Multithreading an interactive program will increase responsiveness to the user by :

- **A.** continuing to run even if a part of it is blocked
- **B.** waiting for one part to finish before the other begins
- **C.** asking the user to decide the order of multithreading
- **D.** None of these

91 . Multithreading on a multi – CPU machine :

- **A.** decreases concurrency
- **B.** increases concurrency
- **C.** doesnt affect the concurrency
- **D.** can increase or decrease the concurrency

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92 The kernel is _____ of user threads.

- **A.** a part of
- **B.** the creator of
- **C.** unaware of
- **D.** aware of

93 . If the kernel is single threaded, then any user level thread performing a blocking system call will :

- **A.** cause the entire process to run along with the other threads
- **B.** cause the thread to block with the other threads running
- **C.** cause the entire process to block even if the other threads are available to run
- **D.** None of these

94 . Because the kernel thread management is done by the Operating System itself :

- **A.** kernel threads are faster to create than user threads
- **B.** kernel threads are slower to create than user threads
- **C.** kernel threads are easier to manage as well as create then user threads
- **D.** None of these

95 If a kernel thread performs a blocking system call, _____.

- **A.** the kernel can schedule another thread in the application for execution.

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- **B.** the kernel cannot schedule another thread in the same application for execution.
- **C.** the kernel must schedule another thread of a different application for execution.
- **D.** the kernel must schedule another thread of the same application on a different processor.

96 Which of the following is FALSE ?

- **A.** Context switch time is longer for kernel level threads than for user level threads
- **B.** User level threads do not need any hardware support
- **C.** Related kernel level threads can be scheduled on different processors in a multiprocessor system
- **D.** Blocking one kernel level thread blocks all other related threads

97 The model in which one kernel thread is mapped to many user-level threads is called :

- **A.** Many to One model
- **B.** One to Many model
- **C.** Many to Many model
- **D.** One to One model

98 The model in which one user-level thread is mapped to many kernel level threads is called :

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- **A.** Many to One model
- **B.** One to Many model
- **C.** Many to Many model
- **D.** One to One model

. 99. In the Many to One model, if a thread makes a blocking system call :

- **A.** the entire process will be blocked
- **B.** a part of the process will stay blocked, with the rest running
- **C.** the entire process will run
- **D.** None of these

100 . In the Many to One model, multiple threads are unable to run in parallel on multiprocessors because :

- **A.** only one thread can access the kernel at a time
- **B.** many user threads have access to just one kernel thread
- **C.** there is only one kernel thread
- **D.** None of these

101 .The One to One model allows :

- **A.** increased concurrency
- **B.** decreased concurrency
- **C.** increased or decreased concurrency
- **D.** concurrency equivalent to other models

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102 In the One to One model when a thread makes a blocking system call :

- **A.** other threads are strictly prohibited from running
- **B.** other threads are allowed to run
- **C.** other threads only from other processes are allowed to run
- **D.** None of these

103 . Which of the following is the drawback of the One to One Model ?

- **A.** increased concurrency provided by this model
- **B.** decreased concurrency provided by this model
- **C.** creating so many threads at once can crash the system
- **D.** creating a user thread requires creating the corresponding kernel thread

104 . When is the Many to One model at an advantage ?

- **A.** When the program does not need multi-threading
- **B.** When the program has to be multi-threaded
- **C.** When there is a single processor
- **D.** None of these

105 . in the Many to Many model when a thread performs a blocking system call :

- **A.** other threads are strictly prohibited from running
- **B.** other threads are allowed to run
- **C.** other threads only from other processes are allowed to run

- **D.** None of these

106 .Thread cancellation is :

- **A.** the task of destroying the thread once its work is done
- **B.** the task of removing a thread once its work is done
- **C.** the task of terminating a thread before it has completed
- **D.** None of these

107 . When a web page is loading, and the user presses a button on the browser to stop loading the page :

- **A.** the thread loading the page continues with the loading
- **B.** the thread loading the page does not stop, but continues with another task
- **C.** the thread loading the page is paused
- **D.** the thread loading the page is cancelled

108 . When one thread immediately terminates the target thread, it is called :

- **A.** Asynchronous cancellation
- **B.** Systematic cancellation
- **C.** Sudden Termination
- **D.** Deferred cancellation

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