

## cit211 List of Questions

*Latex formatted questions may not properly render*

**Q1 ..... is the strongest non-blocking guarantee of progress data**

- ☐ Lock-freedom
- ☒ Wait-freedom
- ☐ Run-freedom
- ☐ Obstruction-freedom

**Q2 In general, a lock-free algorithm can run in ..... phases**



- ☐ two
- ☐ three
- ☒ four
- ☐ five

**Q3 Correct concurrent assistance is typically the most complex part of a ..... algorithm**

- ☒ Lock-free
- ☐ Wait-free
- ☐ Run-free
- ☐ obstruction-free

**Q4 The services provided by the Operating System can be categorised into .....**

- ☒ two
- ☐ three
- ☐ five
- ☐ six

**Q5 The closed-shop mode of operation was used during the ..... generation of the Operating System**



- ☒ first
- ☐ second
- ☐ third
- ☐ fourth

**Q6 In the ..... approach, the kernel itself only provides basic functionality that allows the execution of servers, separate programs that assume former kernel functions, such as device drivers, GUI servers, etc.**

- ☐ picokernel
- ☒ microkernel
- ☐ nanokernel
- ☐ exokernel

**Q7 The processes that are residing in main memory and are ready and waiting to execute are kept on a list called the ..... queue**

- ☒ ready
- ☐ system
- ☐ job
- ☐ process

**Q8 A process goes from the Ready state to ..... state**

- ☐ waiting
- ☒ running
- ☐ finished
- ☐ ready

**Q9 ..... section contains global variables**

- ☒ data
- ☐ storage
- ☐ code
- ☐ memory

**Q10 A ..... operating system is one that appears to its users as a traditional uniprocessor system, even though it is actually composed of multiple processors**

- ☐ network
- ☐ time-sharing
- ☒ distributed
- ☐ real-time

**Q11 In ..... operating system the computer's response time is the turnaround time**

- ☐ real-time
- ☐ time-sharing
- ☐ online
- ☒ batch-processing

**Q12 ..... is about the weakest natural non-blocking progress guarantee**

- ☐ Lock-freedom
- ☐ Wait-freedom
- ☐ Run-freedom
- ☒ Obstruction-freedom

**Q13 When a process creates a new process, .... possibilities exist in terms of execution**

- ☒ two
- ☐ three
- ☐ four
- ☐ six

**Q14 ..... scheduler is another name for CPU scheduler**

- ☒ short-term
- ☐ long-term
- ☐ medium-term
- ☐ instant

**Q15 Preventing the system from continually live-locking is the task of a .....**

- ☐ context switcher
- ☒ contention manager
- ☐ scheduler
- ☐ context manager

**Q16 A ..... queue consists of all processes in the system**

- ☐ ready

- ☐ system
- ☒ job
- ☐ process

**Q17 Which of the following is a type of synchronization?**

- ☐ barrier
- ☐ lock
- ☐ thread join
- ☒ all of the above

**Q18 > In which of the following situations can race condition occur?**

- ☐ File system
- ☐ Networking
- ☐ Life-critical system
- ☒ All of the above

**Q19 ..... scheduling produces the shortest waiting time**

- ☐ RR
- ☐ FCFS
- ☒ SJF
- ☐ Priority

**Q20 ..... scheduling is the simplest scheduling algorithm**

- ☐ RR
- ☒ FCFS
- ☐ SJF
- ☐ Priority

**Q21 A thread comprises of the following except:**

- ☐ thread ID
- ☐ program counter
- ☐ register set
- ☒ none of the above

**Q22 Fibers are supported ..... the kernel**

- ☐ below
- ☒ above
- ☐ beside
- ☐ any of the above

**Q23 ..... are supported directly by the operating system**

- ☐ fibers
- ☐ user threads
- ☒ kernel threads
- ☐ all of the above

**Q24 Threads can be classified into ..... different types**

- ☒ two
- ☐ three
- ☐ four

- ☐ six

**Q25 Blocking message passing is known as .....**

- ☐ asynchronous
- ☐ isochronous
- ☒ synchronous
- ☐ none of the above

**Q26 Which of the following properties is possessed by a communication link in direct communication scheme?**

- ☒ a link is established automatically between every pair of processes that want to communicate
- ☐ a link is associated with exactly two processes
- ☐ Exactly one link exists between each pair of processes
- ☐ all of the above

**Q27 The class of OS that has very little user-interface capability, and no end-user utilities is ..... OS**

- ☒ real-time
- ☐ time-sharing
- ☐ network
- ☐ batch-processing

**Q28 ..... is a very light-weight microkernel**

- ☐ L3
- ☒ L4
- ☐ L6
- ☐ L8

**Q29 The .....kernel represents the closest hardware abstraction layer of the operating system by interfacing the CPU, managing interrupts and interacting with the MMU**

- ☐ exo
- ☐ monolithic
- ☐ micro
- ☒ nano

**Q30 The main disadvantages of ..... kernels are the dependencies between system components**

- ☐ exo
- ☒ monolithic
- ☐ micro
- ☐ nano

**Q31 The loop that the kernel provides for execution whenever no processes are available to run is called the ..... process**

- ☐ passive
- ☐ active
- ☐ dormant
- ☒ idle

**Q32 In the ♦??.....♦?? mode of operation, the individual user (programmer) was responsible for all machine set up and operation, and subsequent clean-up and preparation for the next user**

- ☒ open-shop

- ☐ closed-shop
- ☐ all of the above
- ☐ none of the above

**Q33 In the area of system efficiency, which of the following services is offered by the OS?**

- ☐ Accounting
- ☐ Ease of Evolution of OS
- ☐ New Services
- ☐ All of the above

**Q34 A ready queue may be implemented as the following except:**

- ☐ FIFO queue
- ☐ priority queue
- ☐ a tree
- ☐ none of the above

**Q35 Process execution begins with ..... burst**

- ☐ I/O
- ☐ CPU
- ☐ Wait
- ☐ all of the above

**Q36 The number of threads in the pool can be set heuristically based upon the following factors except:**

- ☐ the expected number of concurrent client requests
- ☐ the number of CPUs in the system
- ☐ the amount of physical memory
- ☐ none of the above

**Q37 Which of the following operating systems does not support kernel threads?**

- ☐ Windows NT
- ☐ Solaris 2
- ☐ BeOS
- ☐ none of the above

**Q38 The user of an Operating system is a(n) .....**

- ☐ person
- ☐ expert
- ☐ supervisor
- ☐ application

**Q39 In ..... capacity buffer, the sender must block until the recipient receives the message**

- ☐ Bounded
- ☐ Unbounded
- ☐ Zero
- ☐ All of the above

**Q40 OS can be defined by the following except:**

- ☐ functions
- ☐ goals
- ☐ objectives

- ☐ none of the above

**Q41 How many common types of multithreading implementation are there?**

- ☐ two
- ☒ three
- ☐ four
- ☐ six

**Q42 Which of the following is not a disadvantage of Deterministic Modelling**

- ☒ It is hard to express a system of complex algorithms and distributions,
- ☐ It requires too much knowledge to be useful
- ☐ It requires exact numbers for input and its answers apply to only those cases
- ☐ It is too specific

**Q43 Which of the following scheduling algorithms is a type of priority scheduling algorithm?**

- ☒ shortest-job-first
- ☐ first-come-first-served
- ☐ round-robin
- ☐ none of the above

**Q44 Threads can be classified into ..... different types**

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**Q50 The main disadvantages of ..... kernels are the dependencies between system components**

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- ☐ nano

**Q51 The number of processes a system may run simultaneously is ..... to the number of CPUs installed**

- ☐ less than
- ☐ greater than
- ☒ equal
- ☐ inversely proportional

**Q52 ..... kernels are able to give the user the illusion that the number of processes being run simultaneously on the computer is higher than the maximum number of processes the computer is physically able to run simultaneously**

- ☐ multi-programming
- ☐ multi-processing
- ☒ multi-tasking
- ☐ all of the above

**Q53 The loop that the kernel provides for execution whenever no processes are available to run is called the ..... process**

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**Q54 In the ??.....?? mode of operation, the individual user (programmer) was responsible for all machine set up and operation, and subsequent clean-up and preparation for the next user**

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- ☐ closed-shop
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- ☐ none of the above

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- ☐ New Services
- ☒ All of the above

**Q56 ..... and debuggers are accessed through the OS to assist programmers in creating programs**

- ☐ creators
- ☐ launchers

- ☐ editors
- ☐ compilers

**Q57 The kernel contains the ..... frequently used functions in the OS**

- ☐ most
- ☐ least
- ☐ seldom
- ☐ all of the above

**Q58 All of these are resources managed by the operating system except .....**

- ☐ CPU time
- ☐ file storage space
- ☐ data
- ☐ printing paper

**Q59 A set of programs called the ..... is provided to assist the programmer in program creation and file management**

- ☐ system software
- ☐ operating system
- ☐ housekeeper
- ☐ utilities

**Q60 The user of an Operating system is a(n) .....**

- ☐ person
- ☐ application
- ☐ supervisor
- ☐ expert

**Q61 When a process creates a new process, there are ..... possibilities in terms of the address space of the new process**

- ☐ two
- ☐ three
- ☐ four
- ☐ five

**Q62 ..... scheduler is another name for CPU scheduler**

- ☐ Short-term
- ☐ long-term
- ☐ medium-term
- ☐ instant

**Q63 A ready queue is generally stored as a .....**

- ☐ b-tree
- ☐ graph
- ☐ stack
- ☐ linked list

**Q64 A ..... queue consists of all processes in the system**

- ☐ ready
- ☐ system

- ☐ job
- ☐ process

**Q65 A ..... is just a passive collection of instructions**

- ☐ process
- ☐ task
- ☐ program
- ☐ job

**Q66 The objective of ..... is to maximize CPU utilization**

- ☐ multiprogramming
- ☐ multiprocessing
- ☐ distributed
- ☐ multitasking

**Q67 A ..... system is a computer hardware configuration that includes more than one independent processing unit**

- ☐ multiprogramming
- ☐ multiprocessing
- ☐ distributed
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**Q68 Typically, a task has ..... states**

- ☐ two
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**Q69 The user of an Operating system is a(n) .....**

- ☐ person
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**Q70 The function of a message system is to allow processes to communicate with one another without the need to resort to ..... data**

- ☐ same
- ☐ separate
- ☐ shared
- ☐ conflicting

**Q71 The objective of ..... is to switch the CPU among processes so frequently that users can interact with each program while it is running**

- ☐ real-time
- ☐ time-sharing
- ☐ network
- ☐ batch-processing

**Q72 The ♦??closed-shop♦?? mode of operation was used during the ..... generation of the Operating System**

- ☐ second
- ☒ first
- ☐ fourth
- ☐ third

**Q73 The services provided by the Operating System can be categorised into .....**

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