Program: BE EXTC Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester VI

Course Code: ETC605 and Course Name: Operating Systems

Time: 1 hour   Max. Marks: 50

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Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	Kernel mode of the operating system is also called
Option A:	user mode
Option B:	system mode
Option C:	supervisor mode
Option D:	Data mode
Q2.	One that is not a type of multiprocessor of the computer system is
Option A:	dual core
Option B:	blade server
Option C:	clustered system
Option D:	single core
Q3.	One that is not a peripheral device of the computer system is
Option A:	Keyboard
Option B:	Mouse
Option C:	Printer
Option D:	Register
Q4.	Instructions that are requested by the system are first
Option A:	Fetched
Option B:	Decoded
Option C:	Executed
Option D:	Deleted
Q5.	Process synchronization of programs is done by
Option A:	Input
Option B:	Output
Option C:	Operating system
Option D:	memory

Q6.	The dining – philosophers problem will occur in case of _____
Option A:	5 philosophers and 5 chopsticks
Option B:	4 philosophers and 5 chopsticks
Option C:	3 philosophers and 5 chopsticks
Option D:	6 philosophers and 5 chopsticks
Q7.	PCB is_____.
Option A:	Process Control Block
Option B:	Program Control Block
Option C:	Process Communication Control
Option D:	Process Counter Block
Q8.	Round robin scheduling falls under the category of _____
Option A:	Non-preemptive scheduling
Option B:	Preemptive scheduling
Option C:	time sharing
Option D:	priority processes
Q9.	What is FIFO algorithm?
Option A:	first executes the job that came in last in the queue
Option B:	first executes the job that came in first in the queue
Option C:	first executes the job that needs minimal processor
Option D:	first executes the job that has maximum processor needs
Q10.	There are 10 different processes running on a workstation. Idle processes are waiting for an input event in the input queue. Busy processes are scheduled with the Round-Robin time sharing method. Which out of the following quantum times is the best value for small response times, if the processes have a short runtime, e.g. less than 10ms?
Option A:	a.tQ = 15ms
Option B:	b.tQ = 40ms
Option C:	c.tQ = 45ms
Option D:	d.tQ = 50ms
Q11.	A deadlock avoidance algorithm dynamically examines the _____ to ensure that a circular wait condition can never exist.
Option A:	resource allocation state

Option B:	system storage state
Option C:	operating system
Option D:	resources
Q12.	The wait-for graph is a deadlock detection algorithm that is applicable when _____
Option A:	all resources have a single instance
Option B:	all resources have multiple instances
Option C:	all resources have a single 5 multiple instances
Option D:	all resources have a single 7 multiple instances
Q13.	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.
Option A:	minimum
Option B:	average
Option C:	maximum
Option D:	approximate
Q14.	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?
Option A:	2
Option B:	3
Option C:	4
Option D:	1
Q15.	If we preempt a resource from a process, the process cannot continue with its normal execution and it must be _____
Option A:	aborted
Option B:	rolled back
Option C:	terminated
Option D:	queued
Q16.	What is compaction?
Option A:	It is a technique for overcoming internal fragmentation
Option B:	It is a paging technique
Option C:	It is a technique for overcoming external fragmentation

Option D:	It is a technique for overcoming fatal error
Q17.	The operating system and the other processes are protected from being modified by an already running process because _____
Option A:	they are in different memory spaces
Option B:	they are in different logical addresses
Option C:	they have a protection algorithm
Option D:	every address generated by the CPU is being checked against the relocation and limit registers
Q18.	Every address generated by the CPU is divided into two parts. They are _____
Option A:	frame bit & page number
Option B:	page number & page offset
Option C:	page offset & frame bit
Option D:	frame offset & page offset
Q19.	In a paged memory, the page hit ratio is 0.35. The required to access a page in secondary memory is equal to 100 ns. The time required to access a page in primary memory is 10 ns. The average time required to access a page is?
Option A:	3.0 ns
Option B:	68.0 ns
Option C:	68.5 ns
Option D:	78.5 ns
Q20.	A multilevel page table is preferred in comparison to a single level page table for translating virtual address to physical address because _____
Option A:	it reduces the memory access time to read or write a memory location
Option B:	it helps to reduce the size of page table needed to implement the virtual address space of a process
Option C:	it is required by the translation lookaside buffer
Option D:	it helps to reduce the number of page faults in page replacement algorithms
Q21.	RAID level 5 is also known as _____
Option A:	bit-interleaved parity organization
Option B:	block-interleaved parity organization
Option C:	block-interleaved distributed parity
Option D:	memory-style ECC organization

Q22.	Consider a disk queue with requests for I/O to blocks on cylinders.
	98 183 37 122 14 124 65 67
	Considering SSTF (shortest seek time first) scheduling, the total number of head movements is, if the disk head is initially at 53 is?
Option A:	224
Option B:	236
Option C:	245
Option D:	240
Q23.	Consider a disk queue with requests for I/O to blocks on cylinders.
	98 183 37 122 14 124 65 67
	Considering FCFS (first cum first served) scheduling, the total number of head movements is, if the disk head is initially at 53 is?
Option A:	600
Option B:	620
Option C:	630
Option D:	640
Q24.	What is the major disadvantage with a linked allocation?
Option A:	internal fragmentation
Option B:	external fragmentation
Option C:	there is no sequential access
Option D:	there is only sequential access
Q25.	By using File Allocation Table (FAT), random access time is _____
Option A:	the same
Option B:	increased
Option C:	decreased
Option D:	not affected