UNIT 3 MCQ Most Expected Questions						
Sno.	**Question Statement**	**Correct**	**Choice 1**	**Choice 2**	**Choice 3**	**Choice 4**
1	A resource type, R is represented by 3-dots, it has	2	2 instances	3 instances	4 instances	6 instances
2	A system is in the safe state if	1	the system can allocate resources to each process in some order and still avoid a deadlock	there exist a unsafe sequence	all of the mentioned	none of the mentioned
3	RAG stands for	2	Resource and Graph	Resource Allocation Graph	Resource After Graph	None of these
4	For multiple instances of a resource type which algorithm is used	2	Divide and Conquer algorithm	Banker's Algorithm	Sorting Algorithm	Critical Section
5	The Need-matrix is given by the formula	1	Need = Max – Allocation	Need = Max + Allocation	Need = Max * Allocation	Need = Allocation-Max
6	If the wait for graph contains a cycle	2	then a deadlock does not exist	then a deadlock exists	then the system is in a safe state	either deadlock exists or system is in a safe state
7	To avoid deadlock …….	1	there must be a fixed number of resources to allocat	resource allocation must be done only once	all deadlocked processes must be aborted	inversion technique can be used
8	In Resource Allocation Graph RAG, circles represent	1	Processes	Resources	Both '1' and '2'	None of these
9	A system has 3 processes sharing 4 resources. If each process needs a maximum of 2 units then deadlock	1	can never occur	may occur	has to occur	none of these
10	If we preempt a resource from a process, the process cannot continue with its normal execution and it must be	2	aborted	rolled back	terminated	queued
11	If a process is executing in its critical section, then no other processes can be executing in their critical section. What is this condition called?	1	mutual exclusion	critical exclusion	synchronous exclusion	semaphores
12	Process synchronization can be done on	3	hardware level	software level	both hardware and software level	none of these
13	Which one of the following is a mathematical way to determine the deadlock occurrence	1	resource allocation graph	starvation graph	inversion graph	wait for graph
14	For non sharable resources like a printer, mutual exclusion _____	1	must exist	must not exist	may exist	may or may not be
15	Deadlock prevention is a set of methods _____	1	to ensure that at least one of the necessary conditions cannot hold	to ensure that all of the necessary conditions do not hold	to decide if the requested resources for a process have to be given or not	to recover from a deadlock
16	Mutual exclusion can be provided by the	3	mutex locks	binary semaphores	both mutex locks and binary semaphores	none of the mentioned
17	Inter process communication is…..	2	allows processes to communicate and synchronize their actions when using the same address space	allows processes to communicate and synchronize their actions	allows the processes to only synchronize their actions without communication	none of the mentioned
18	Message passing system allows processes to	1	communicate with each other without sharing the same address space	communicate with one another by resorting to shared data	share data	name the recipient or sender of the message
19	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.	1	resources currently available	processes that have previously been in the system	resources currently allocated to each process	future requests and releases of each process
20	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	3	minimum	average	maximum	approximate
21	The data structures available in the Banker's algorithm are __	4	Available	Need	Allocation	All of the mentioned

22	Banker's algorithm deals with	2	deadlock prevention	deadlock avoidance	deadlock recovery	mutual exclusion
23	Which process can be affected by other processes executing in the systen	1	cooperating Process	Child Process	Parent Process	indipende nt process
24	If the process executing its critical section, no other process can executing in their critical section. What is this condition called	2	Critical Execution	Mutual Exclusion	Progress	Synchron ous Execution
25	Which one of the following is a synchronization tool	3	Thread	Pipe	Semapho res	socket
26	Techniques can be used to resolve conflicts, such as competition for resources, and synchronize processes so that they can co-operate	2	Mutual Exclusion	Synchroni zation	Deadlock	Starvation
27	Which algorithm provides process synchronization for two processes	3	Semaphores	Wait & signal	Peterson Solution	Race Condition
28	Process synchronization can be done on	3	hardware level	software level	both hardware and software level	none of the mentioned
29	The request and release of resources are _____	3	command line statements	interrupts	system calls	special program
30	For sharable resources, mutual exclusion __	2	is required	is not required	may be or may not be required	none of the mentioned
31	Semaphore is a/an __ to solve the critical section problem.	3	hardware for a system	special program for a system	integer variable	none of these
32	The resource allocation graph is not applicable to a resource allocation system	1	with multiple instances of each resource type	with a single instance of each resource type	single & multiple instances of each resource type	none of these
33	For a deadlock to arise, which of the following conditions must hold simultaneously	4	Mutual exclusion	No preemption	Hold and wait	All of the mentioned
34	What is the drawback of banker's algorithm?	4	in advance processes rarely know how much resource they will need	the number of processes changes as time progresses	resource once available can disappear	all of the mentioned
35	In a uniprocessor system concurrent processes cannot have overlapped	4	Access	Terminatio n	Completio n	Execution
36	To ensure that the hold and wait condition never occurs in the system, it must be ensured that :	4	whenever a resource is requested by a process, it is not holding any other resources	each process must request and be allocated all its resources before it begins its execution	a process can request resources only when it has none	All of these
37	Which of the following two operations are provided by the IPC facility?	4	write & delete message	delete & receive message	send & delete message	none of these
38	In message passing a process receives information by executing the	4	send	Send Primitive	Receive	Receive Primitive
39	What is Inter process communication?	2	allows processes to communicate and synchronize their actions when using the same address space	allows processes to communica te and synchronize their actions without using the same address space	allows the processes to only synchroniz e their actions without communic ation	none of the mentioned
40	Mutual exclusion can be provided by the	3	mutex locks	binary semaphore s	both mutex locks and binary semaphore s	none of the mentioned
41	What is the solution to starvation?	1	the number of rollbacks must be included in the cost factor	the number of resources must be included in resource preemption	resource preemptio n be done instead	all of the mentioned
42	A system has 3 processes sharing 4 resources. If each process needs a maximum of 2 units then deadlock	1	can never occur	may occur	has to occur	none of the mentioned

43	The wait-for graph is a deadlock detection algorithm that is applicable when	1	all resources have a single instance	all resources have multiple instances	all resources have a single 7 multiple instances	all of the mentioned
44	Circular wait condition can be prevented by defining a linear ordering of	2	Program Type	Resource Type	User Type	Process Type
45	All deadlocks involve conflicting needs for	3	Computers	Users	Resourse	Programs
46	Concurrent Processes are processes that	2	do not overlap in time	overlap in time	are executed by a processor at the same time	none of these
47	The code that changes the value of the semaphore is _____	3	remainder section code	non – critical section code	critical section code	none of the mentioned
48	Peterson's algorithm is the solution of which of the following problem	2	deadlock	mutual exclusion	Bound Wait	none of these
49	The segment of code in which the process may change common variables, update tables, write into files is known as _____	2	program	critical section	non – critical section	synchronizing
50	For Mutual exclusion to prevail in the system _____	1	at least one resource must be held in a non sharable mode	the processor must be a uniprocessor rather than a multiprocessor	there must be at least one resource in a sharable mode	all of the mentioned
51	Semaphores are used to solve the problem of	3	process synchronization	mutual Exclusion	race condition	none of these
52	The process to be aborted is chosen on the basis of the following factors	4	priority of the process	process is interactive or batch	how long the process has computed	all of the mentioned
53	To ..... to a safe state, the system needs to keep more information about the states of processes.	2	abort the process	roll back the processes	queue the process	none of these
54	An edge from process Pi to Pj in a wait for graph indicate that..	1	Pi is waiting for Pj to release a resource that Pi needs	Pj is waiting for Pi to release a resource that Pj needs	Pi is waiting for Pj to leave the system	Pj is waiting for Pi to leave the system
55	For sharable resources, mutual exclusion ___	2	is required	is not required	may be or may not be required	none of the mentioned
56	What are Multithreaded programs	1	more prone to deadlocks	not at all prone to deadlocks	lesser prone to deadlocks	none of these
57	'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	2	may occur	can never occur	has to occur	none of these
58	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	3	1	3	2	4
59	Which of the following resources can cause deadlocks	2	Read only files	Shares programs	Printers	all of the mentioned
60	For effective operating system, when to check for deadlock?	3	every time a resource request is made	at fixed time intervals	both (a) and (b)	none of these