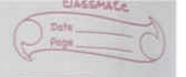


un execution.

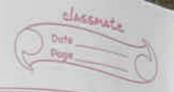
simultaneously



Emong Heil Hickory Multitarking - It is a technique That allow multiple test of processes to Sun concurrently on a single cow ! Quest) CPU scheduling Algorithms 1 - These are wed by the OI to determine the Order in which processes are executed on the 1) First Come, Einst Somed (FCFS) - the process that arrives first () is executed first 2) Shortest Job Near (STN) or shortest Job Eur (SJF):-SJN OI SJF Icheduling select the process with the shortest total execution ANJELLIAN OLL time next. 3) Round Robin - Round Robin is a servino scheduling algorethm that assigns a fixed time quartum to each phocess in a circular 4) Brienty Scheduling - It assigns a privaity value to each process, and the CPU is allocated with the shighest periority

5) Multilevel Oneve Scheduling - Multilevel quient scheduling divides the tready quiene into multiple periority quienes, each with its own scheduling algorithm.

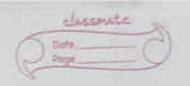
phito what is critical section problem? The critical section suggestents a portion of code or block where a process of thread accessed a shared susousces such as file of database at dame to that salpas a teather wes 6) What is Process Oo Synchronisation? -> Multiple processes as threads marking on a different tack simultaneously. Process synchronization ensure that they cooperate and commu-- nicate effectively to airoid conflicte and eneures persper older of execution Key seequirement of synchronization mechanismi: 1) Mutual exclusion 2) Progress (at least one at a ctime) 3) Bounded Waiting Luci7) Process Synchronization Mechanisms? expos will to Queue wattano midlant islume 1) hocks/ Muteres: hocks or muteres (mutual exclusions) provide a sopra simple and effective may to achieve mutual exclusion They allow long one perocess or thread to acquire a lock doors at a time, enewing carecarieros exclusive access to a shared revources or critical section. +1) beautier proportion to annied annie end rend" 2) Semaphores: They can be implemented as binary semaphores or counting semaphores.



Semaphors provide mechanism for mutual exclusion, signalling and coordination. to the stand 3) Read-write Locks : where multiple sceaders can read simultaneously access a record weithout a conflict but it is not for write locks. Nath into promote or thread the total Con Que 8 What is Deadlock? - It is a Lituation in which more than on * process is blocked because it is holding a lucesowice and also require some resources that is acquired by some other process Necessary condition for readlocks: · Mutual Exclusion - It complies that two proces -ses can't use the same liesource at the same time . . Hold & mait - of process maits for some resource while holding another resource at the same timeyn 19x94am 20 1900 · No premption - The process once scheduled mill be executed till the completion. · Cucular wait - All the processes must be must -ing for the resources in a cyclic manner المرور ورايس و مدوور الم Ques 9 Deadlock Handing Tochniques! (RTOS) +1) Deadlock prevention - to avoid any one cond!

They lan be emplemented

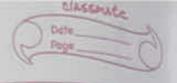
einizu Lemaphane & (Burling / Opropholis



- 2) Deadlock twoidance Same as perevious, bankers' algorithm.

 2) Doadlock Detection periodically enamining the
- 3) Deadlock Detection periodically enamining the suspice allocation state to determine if a deadlock has occured.
- y) Deadlock Recovery used to recover from a deadlock once it has been detected;
- 5) Deadlock & grownice. Some lystem choose to ignore the problem of deadlock entirely
- the functionality of an OS which shandles of manages primary memory and moves processes back and forth between main memory & during exection:
 - Two approaches used in memory management
 - 1) Eixed Partioning memory is divide into fixed sized partion of blocks and each partion is assigned to a specific track process or test.
 - 2) Dynamic Partioning dynamically stored
- well Partion and Memory allocation?

First Fit - It allocates the first available memory block that is large enough to



millud play

accomodate the perocess.

Best Eit: - The best fit algorithm searches for the smallest available memory block that is large enough to accomodate the percon.

Worst Eit-largest available memory block to to the process of the same would

Que 12) What is Paging? It is a storage mechanism used in 08 to retrieve processes ferom america secondary staring to the mais memory as pages. the functionality of an of which funder of

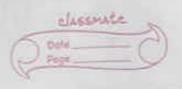
Quei 13) What is virtual memory? - I st creates an imaginary memory space by com-- bining physical memory (RAM) and second stones (like a hard disk) when a program need moul memory than actual, it tempuorily moves some date to the secondary storage.

exist and about the manen - in Ques 14 Page Replacement Algorithm?

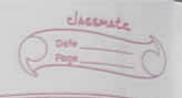
- 1) Ever In Einst Out will many to great the summer
- 2) Optimal Page Replacement

pulpar south to Hart and

3) heart Recently was.



1015) What is Thrashing 9 I a phenomenal that occurs in computer system warese when the system spends an excessive amount of time an on page swappring reather than executing mequinocks. 1016 What is degmentation? Segmentation is a memory management technique is which the memory is divide into the varieble size parti degmentation divides process into smaller subparti known as modules. well) Disk Management - Duk management in os involves organizing and maintaining the date on a storage device such as hard disk or solid-state wes 18) Duk Scheduling Algorithm ? of algorithm that keeps and meneges input and output requests arriving for the disk in a system 1) FCFS (Eirst-Come, Eirst Served) 2) SSTF (Shortest seek Time Einst) 3) SCAN 4) C-SCAN LOOK 6 C-LOOK (Cucular look)



accompdate the peroces.

Best Eit. The best fit algorithm searches
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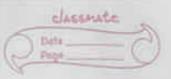
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Throad sought is doubt died warmene

1) Eiret In Eiret Out

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