CS604 Operating System

Update MCQS For Final Term

Solve By Vu Topper RM

85% To 100% Marks

بری صحبت سے تنہائی بہتر ہے اور تنہائی سے نیک صحبت بہتر ہے

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Possible side effects of _____deadlocks are low device utilization and reduced system throughput.

A. Ignoring
B. Avoiding
C. Recovering
D. Preventing

Which of the following is correct definition for wait operation?

A. wait(S) { while(S<=0);// no o S--; Page 108
B. wait(S) { S++; }
C. wait(S) { while(S>=0) ;// no op S--; }
D. wait(S) { S--; }

The ----------scheme is not applicable to a resource allocation system with multiple instances of each resource type.

A. Wait for graph Page 145
B. None of the given options
C. Resource allocation graph
D. Both Resource-allocation and wait-for graph

Semaphores are used to synchronize _____ processes.

A. Tough
B. Parallel
C. Running
D. Concurrent

Following is not the classical problem of synchronization.

A. Bounded buffer problem
B. Reader writer problem
C. Dining philosophers problem
D. Counting Semaphore problem Page 118

In Resource Allocation Graph, a _____Pi --->Rj indicates that process Pi may request resource Rj at some time in the future.

A. Claim edge Page 138
B. Request edge
C. Allocation edge
D. Assignment edge

_____ is used in the detection and recovery mechanism to handle deadlocks.

A. Circular Graph
B. Wait-for Graph Page 144
C. Claim Edge Graph
D. Resource allocation Graph

Typically monitor, a high level synchronization tool is characterized by _____ and _____.

A. Signal, wait
B. Local variables, semaphores
C. Global variable,local variable
D. Local data, programmer defined operators Page 125

In order to remove the problem like busy waiting, some high level synchronization constructs are defined. What are they?

Critical regions and Monitors Page 124
Critical regions and Semaphores

The integer value of _____ semaphores can not be greater than 1.

A. Mutex
B. Binary Page 117
C. Counting
D. Bounded buffer

Banker's algorithm is used for _____

A. Deadlock removal
B. Deadlock detection
C. Deadlock prevention
D. Deadlock avoidance Page 140

_____ is an integer variable accessible through wait and signal which are atomic operations.

A. Signal
B. Mutex
C. Semaphore Page 111
D. Busy waiting

The _____requires that once a writer is ready, that writer performs its write as soon as possible. In other words, if a writer is waiting to access the object, no new readers may start reading.

A. first readers-writers problem
B. third readers-writers problem
C. fourth readers-writers problem
D. second readers-writers problem Page 116

A state is _____ if the system can allocate resources for each process in some order and still avoid a deadlock.

A. Safe Page 134
B. Unsafe
C. Mutual
D. Starvation

_____ algorithm is used in Deadlock avoidance.

A. Bakery
B. Banker's Page 139
C. Safe Sequence

D. Mutual exclusion

Binary semaphore whose integer value cannot be can be _____simpler to implement.

A. >1 Page 114
B. <1
C. <=1
D. >=1

Deadlock _____ provides a set of methods for ensuring that at least one of the necessary conditions cannot hold.

A. Handling
B. Avoidance
C. Recovery
D. Prevention Page 132

The condition in which a set {P0, P1… Pn} of waiting processes must exist such that P0 is waiting for a resource that is held by P1, P1 is waiting for a resource that is held by P2, and so on, Pn-1 is waiting for a resource held by Pn, and Pn is waiting for a resource held by P0. This condition is known as _____.

A. Circular wait Page 131
B. Hold and wait
C. No preemption
D. Mutual exclusion

The problem of Deadlocks can be solved by _____ method(s).

A. All of the given Page 132
B. Deadlock avoidance
C. Deadlock prevention
D. Allowing deadlock to occur, then detect and recover

The integer value of _____ semaphores can range over an unrestricted integer domain.

A. Mutex
B. Binary
C. Counting **Page 117**
D. Bounded buffer

If the system can allocate resources to each process in some order and still avoid a deadlock then it is said to be in _____ state.

A. Safe **Page 134**
B. Mutual
C. Un-Safe
D. Starvation

Wrong use of wait and signal operations (in context with semaphores) can cause _____ problem(s).

A. Deadlock
B. Mutual Exclusion
C. Bounded Waiting
D. All of the given options are correct

Deadlock can be deal with _____ways.

A. 1
B. 2
C. 3 **Page 132**
D. 4

The condition where a set of blocked processes each holding a resource and waiting to acquire a resource held by another process in the set, is termed as _____.

Deadlock **Page 130**
Starvation

If a system is not in a safe state, there can be NO deadlocks.
False Pagen 137
True

Deadlock detection and recovery technique is exactly similar to deadlock avoidance technique to handle deadlock in the system.
True
False

A dashed line is used to represent a _____ in Resource Allocation Graph.
A. Claim edge Page 136
B. Request edge
C. Allocation edge
D. Assignment edge

Removing the possibility of deadlock in dining philosopher problem does not ensure the _____ problem will not occur.
A. Starvation Page 123
B. Critical Section
C. Bounded Buffer
D. Mutual Exclusion

In deadlock detection and recovery algorithm, a deadlock exists in the system if and only if the wait for graph contains a _____.
A. Node
B. Edge
C. Cycle Page 147
D. Graph

The process of holding at least one resource and waiting to acquire additional resources that are currently being held by other processes is known as _____.

A. Circular wait
B. Hold and wait **Page 131**
C. No preemption
D. Mutual exclusion

Variable names are ---------- addresses.

A. Relative
B. Physical
C. Symbolic
D. Relocatable **Google**

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Starvation

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2

3 Page 132

4

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Deadlock Page 130

Starvation

The _____ protection scheme guards against a process trying to access a page that does not belong to its address space.

A. Hybrid

B. Primary Page 169

C. Tertiary

D. Secondary

Assume a logical address space of 16 pages of 1024 words, each mapped into a physical memory of 32 frames. Each word consists of 2 bytes. What will be the total number of bits required for p (page number)?

A. 4 bits Page 166

B. 8 bits

C. 16 bits

D. 32 bits

Address Binding will be _____ in Multiprogramming with Variable Tasks (MVT)

A. Fixed

B. Static

C. Variable

D. Dynamic

The system maintains a _____ of all processes whose memory images are on the backing store or in memory and are ready to run.

A. Que
B. List
C. Ready que **Page 157**
D. Environment

In_____, the library files are linked at load time.

Static Linking
Dynamic Linking

Main Memory is _____ memory.

A. Virtual
B. Volatile
C. Permanent
D. Non-volatile

Object files and libraries are combined by a ---------- program to produce the executable binary

A. Linker
B. Loader
C. Compiler
D. Text editor

Memory protection in paging is achieved by associating _____ with each page. This bit indicates whether the page is in the process address space or not.

A. paging table
B. counting bits
C. segment table
D. Protection bits **Page 169**

_____ consists of a large array of words or bytes, each with its own address.

A. Data
B. Stream
C. Memory **Page 150**
D. Hard disk

Logical memory is divided into blocks of the same size, called_____ .

A. Pages **Page 162**
B. Table
C. Frame
D. Page size

_____ is constrained by factors like quantum for RR scheduler and pending I/O for swapped out process.

A. Rollin
B. Rollout
C. Kernel
D. Swapping **Page 157**

---------- register contains the size of the process

A. Base register
B. Index register
C. Limit register **Page 13**
D. Stack pointers register

What do we name to an address that is generated by the CPU?

A. Logical address **Page 152**
B. Binary addresses
C. Physical address
D. None of the given options

What do we name to an address that is loaded into the memory-address register of the memory?

A. Logical address
B. Physical address Page 155
C. Binary addresses
D. None of the given options

A page table needed for keeping track of pages of the page table is called ----------

A. Page size
B. 2-level paging
C. Page directory Page 173
D. Page table size

In pages segmentation, the logical address is legal if d is _____segment length.

A. Equal to
B. Less than Page 180
C. Greater than
D. Greater than or equal to

The collection of processes that is waiting on the disk to be brought into the memory for execution forms the --------

A. Output queue
B. Input queue Page 151
C. None of the given options
D. Both input and output queue

----------points to the page table

A. Page offset
B. Translation look-aside buffers
C. Page-table base register (PTBR)
D. Page-table length register (PRLR)

Physical memory is broken down into fixed-sized blocks, called---------- and Logical memory is divided into blocks of the same size, called ----------

A. Pages, frame
B. Frames, holes
C. Frames, pages Page 165
D. Holes, segments

External Fragmentation takes place in _____

A. Paging
B. Multi-tasking
C. Multiprogramming with Fixed Tasks (MFT)
D. Multiprogramming with Variable Tasks (MVT) Page 163

Addresses generated relative to part of program, not to start of physical memory are

A. Virtual
B. Physical
C. Symbolic
D. Relocatable

The address generated by the CPU, after any indexing or other addressing-mode arithmetic, is called a --------address, and the address it gets translated to by the MMU is called a ---------address.

A. Valid, invalid
B. Physical, Virtual
C. Virtual, physical Page 153
D. Hexadecimal, Binary

In ---------- technique, memory is divided into several fixed-size partitions.

A. Overlays
B. Swapping

C. Multiprogramming with Fixed Tasks (MFT) **Page 160**
D. Multiprogramming with Variable Tasks (MVT)

_____is the separation of user logical memory from physical memory.
A. Rom
B. Virtual Memory **Page 185**
C. Physical memory
D. None of the given options

In Overlay technique, we can overload any part of the program with the part of the program required needed recently.
True
False

If there exists a logical address space of 16 pages of 1024 words, each mapped into a physical memory of _____ frames.
A. 16
B. 32 **Page 165**
C. 48
D. 64

----------is the process of mapping a name to an address.
A. Routing
B. Binding
C. Memory **Page 194**
D. Addressing

_____ is caused due to un-used space in physical memory.
A. MVT
B. Paging
C. External fragmentation
D. Internal fragmentation

Every ----------generated by the CPU is divided into two parts: a page number (p) and a page offset (d).

A. Page
B. Logical address Page 163
C. Physical address
D. Process address space

_____ is commonly implemented as demand paging.

A. Paging
B. Virtual Memory Page 185
C. Physical Memory
D. Logical Addressing

The main memory is usually divided into partitions, one for _____ and other for _____ .

A. Operating system, CPU
B. Processes, Virtual Memory
C. Base Register, Limit Register
D. Operating System, User processes

The run-time mapping from virtual to physical addresses is done by a piece of hardware in the CPU, called the ----------

A. Registers
B. CPU Scheduler
C. None of the given options
D. Memory management unit (MMU) Page 155

Cache is non-volatile memory.

False Page 153
True

It is not possible to run a program whose size is greater than the size of the main memory.
36 bits
48 bits Page 185
64 bits
128 bits

The set of all physical addresses corresponding to the logical addresses is a ---------- of the process
Process address space
Logical address space
Physical address space Page 155
None of the given options

Address Binding will be at _____ in Multiprogramming with Fixed Tasks (MFT)

A. Run time
B. Load time Page 160
C. Dynamic time
D. None of the given options

In memory management programmer's view of memory representation is called _____.
Offset
Segmentation Page 175
Logical address
Physical address

Intel is basically designed for following Operating Systems except _____.
Linux
OS/2

Windows
MULTICS Page 182

Intel 80386 used paged segmentation with _____ level paging.
One
Two Page 185
Four
Three

The logical address of Intel 80386 is _____.
36 bits
48 bits Page 185
64 bitts
128 bits

A _____ system is similar to a paging system with swapping
Page fault
Demand paging Page 186
Context switching
None of the given options

The segment table maps the _____ to physical addresses.
Page addresses
Shared page addresses
One-dimensional logical addresses
Two-dimensional logical addresses Page 175

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