

CS609 CURRENT PAPER 2023

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Question No : 2 of 50

If invalid file handle is passed as parameter to the `CloseFile()` API, then it will return ____

Answer

True value

False value

A new handle

Close a handle

Question No : 1 of 50

If the file is not opened in concurrent mode, then `ReadFile()` API starts reading from the ____

Answer

Start of file

Current position

End of File

Backup file

Question No : 3 of 50

The exception handler is actually a code portion associated with ____ block.

Answer

_try

_catch

_except

_finally

Question No : 9 of 50

Which function is used to obtain the actual handle of a process?

Answer

`GetCurrentProcess()`

`OpenProcess()`

`CreateProcess()`

`GetCurrentProcessId()`

It is _____ to refer to a mapping file multiple times while using pointers as data structure.

Useful

Meaningless

Necessary

Optional

The filter function _____ the type of an exception.

Identifies

Evaluates

Restricts

Excludes

Which option is incorrect when the `TraverseDirectory()` API is required to be use?

It allows non-recursive traversal

It allows recursive traversal

It allows both the non-recursive and recursive traversal

Recursive and non-recursive traversal option is irrelevant

The _____ function terminates the process if the program indicates the error is fatal.

ReportError()

ReportHandle()

TerminateHandle()

TerminateProcess()

Question No : 8 of 50

If binary functions inside DLL are accessed at load time, then called as _____.

Answer

Explicit linking

Implicit linking

both explicit and implicit linking

Thread linking

Question No : 13 of 50

Which statement is incorrect when processes are made synchronized?

Answer

It can decrease the overhead of a system

It can increase the overhead of system

Some processes can be blocked in synchronization

Mutual exclusion is achieved

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In a `GetProcessTime()` API, the elapsed time of a process can be computed by subtracting the _____.

Answer

ExitTime from CreationTime parameter

CreationTime from ExitTime parameter

UserTime from ExitTime parameter

ExitTime from UserTime parameter

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Which parameter is required to be pass to the `ExitThread()` API?

Answer

Thread ID

Thread Object name

Both thread ID and its object name

Thread ExitCode

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How many number of time's parameters are provided to a `GetProcessTime()` API to compute the elapsed time of a process?

0

From chatgpt

1

2

4

✓

Question No : 15 of 50

When all the threads of a process are made exit or terminate, then the process _____.

Answer

Will still survive

Will terminate

✓

Will terminate for specified period of time

Will temporarily suspend

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_____ API creates thread handle from a thread ID

Answer

`GetThreadId()`

`GetCurrentThreadId()`

`GetCurrentThread()`

`OpenThread()`

✓

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If you want to create 4 threads i.e. Thread 0, Thread 1, Thread 2 and Thread 3, they all must be created at _____ state.

Answer

Ready

Suspended

✓

Running

Blocked

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A fiber can obtain its identity by calling _____ API.

Answer

GetCurrentFiber()

GetFiberData()

GetFiberId()

GetFiberIdentity()

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Which of the following is not a thread model?

Answer

Boss worker

Client-server

Pipeline

Peer to peer

Question No : 19 of 50

In Thread Local Storage (TLS) arrangement, row represents _____ while column represent _____.

Answer

Thread Number, TLS Index

TLS Index, Thread Number

Thread number, Process Number

Process Number, TLS Index

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The use of global variable **flag** in the solution of critical section problem suffers or fails due to the _____ of threads.

Context switch

Hold and wait condition

Sleeping condition

Deadlock condition

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A thread can enter _____ time(s) into its critical section at different instances in thread synchronization.

Answer

Only one

Several

Exactly ten

At suspended

Finish Exam

Flag

First

Last

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The use of _____ ensured that the main memory is updated and cache of all the processors is coherent.

Answer

Volatile qualifier

Global flag

Volatile qualifier and Global flag

Memory barrier

Finish Exam

Flag

First

Last

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The producer also computes a simple _____ of the message in the Producer-Consumer problem.

Answer

checkmul

checkdiv

checksub

checksum

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For the efficient use of critical section and mutexes, the thread priority should be decided by the _____.

Answer

Program

OS Scheduler

Mutex

Critical Region

Question No : 24 of 50

For mutual exclusion to work, _____ variable(s) must be protected by a single synchronization object across all threads.

Answer

important

local

Shared

Local integer

Question No : 27 of 50

Windows provides an object called a _____. Using this object we can enforce mutual exclusion.

Answer

mutex

multask

mutex

mutext

Question No : 25 of 50

Producer consumer problem is a classical problem in _____.

Answer

multi exclusion

mutual process

mutual exclusion

object exclusion

Question No : 28 of 50

Mutexes have some advantages beyond CRITICAL_SECTION. Mutexes can be named and have _____.

Answer

sections

timers

handles

self-loops

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Which of the following synchronization construct is used for semaphore?

Answer

Enter

Leave

Wait

Set

Question No : 30 of 50

Which of the following synchronization objects is not a named object?

Critical Section

Mutex

Semaphore

Event

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To minimize the concurrency related issues, _____.

Answer

Mutex is unlocked on entry and locked on exit

Size of the critical region should be minimized

Premature exits from the critical region are necessary

Critical Region must have more than one entry

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According to the MSDN the optimal spin count for heap related functions is

3000

4000

5000

6000

Optimal spin-count ensures _____

Less system calls

More system calls

More overheads

Critical Section overheads

Finish Exam

Flag

First

Last

A(n) _____ is a collection of worker threads that execute asynchronous callbacks on behalf of the application.

Answer

Address Space

Thread pool

Callback Functions

Environment Variables

When CreateThreadpoolWork() is called then _____ is(are) executed using the process thread pool.

Callback functions

Kernel functions

Kernel routines

Work object code

Finish Exam

Flag

First

Last

_____ indicates the processors configured on the system

Answer

Process Affinity Mask

Processor Affinity Mask

Thread Affinity Mask

Kernel Affinity Mask

By default, the _____ makes scheduling decisions and allocates processors to each thread.

Answer

System programmer

Kernel

BIOS

Loader

Question No : 38 of 50

_____ can be used to assign a thread to a specific processor.

Answer

Memory Management Unit

Device Driver

Processor Affinity

Loader

Question No : 40 of 50

Thread affinity mask is a subset of _____.

Answer

Process Affinity Mask

Processor Affinity Mask

Thread Affinity Mask

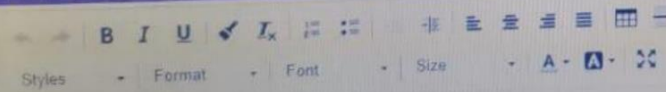
Consider the following code given below for using the Thread Pools:

```
int _tmain(DWORD argc,LPTSTR argv){  
    INT nThread;  
    HANDLE *pWorkobjects;  
    THARG *pThreadArg;  
    TP_CALLBACK_ENVIRON cbe;  
    nThread=_toi(argv[1]);
```

You need to write code to first allocate memory to pWorkObjects using **malloc()** then use **CreateThreadpoolWork()** api function to create a thread pool worker object.

Considering the name of work call back is "Worker".

Answer



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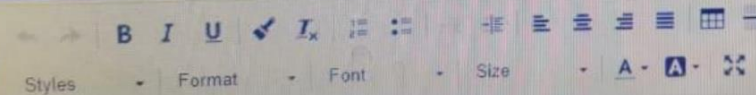
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The general syntax for API that is used to move a thread from its running state to waiting state is

VOID Sleep(DWORD dwMilliseconds);

1. In above API, if the parameter **dwMilliseconds** is specified as INFINITE, then what will happen to a thread?
2. If the parameter **dwMilliseconds** is specified as 0, then what will happen to a thread?

Answer



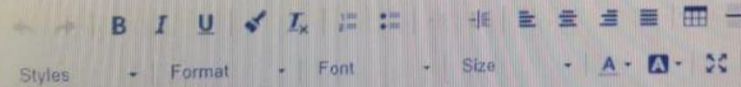
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Keeping in view the following syntax of **DuplicateHandle()** API, answer the questions.

BOOL DuplicateHandle(HANDLE hSourceProcessHandle, HANDLE hSourceHandle,
HANDLE hTargetProcessHandle, LPHANDLE lpTargetHandle, ----)

1. Mention the name of parameter that shows the original or real handle.
2. Mention the name of parameter that receives a copy of the original handle.

Answer



Question No : 49 of 50

Write the names of 4 functions used to create and manage Semaphores.

Answer



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In the CreateNamedPipe() API function the dwOpenMode specifies many flags. Name any three.

Answer

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Write the functionalities of the following APIs.

- GetLastError()
- FormatMessage()
- LocalFree()

Answer

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Question No : 43 of 50

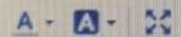
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Write the general syntax of APIs that are used for:

1. Allocating index in the Thread Local Storage (TLS)
2. Deallocating index from the Thread Local Storage (TLS)

Answer

  Styles

 A - A - 

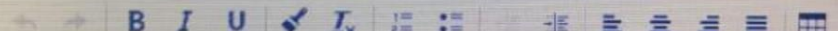
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Write names of three windows functions that are used to manage Mutexes?

Answer

  Styles

 A - A - 

© 111

Answer



B
I
U









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1. Process
2. Thread

Answer









