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Question No : 50 of 50

Marks: 5 (Time 10 Min)

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=_ttoi(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

Rich text editor toolbar with icons for Bold (B), Italic (I), Underline (U), Bulleted List, Numbered List, Indent, Outdent, Decrease Indent, Increase Indent, Table, and Link/Unlink. Below the icons are labels for Styles, Format, Font, and Size, followed by font color and background color selection tools.

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Marks: 5 (Ti

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

Rich text editor toolbar with icons for Bold (B), Italic (I), Underline (U), Bulleted List, Numbered List, Indent, Outdent, Decrease Indent, Increase Indent, Table, and Link/Unlink. Below the icons are labels for Styles, Format, Font, and Size, followed by font color and background color selection tools.

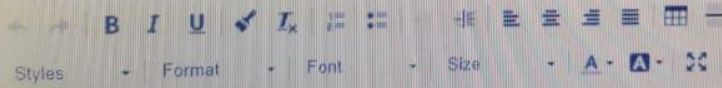
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Keeping in view the following syntax of **DuplicateHandle()** API, answer the questions.

```
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.

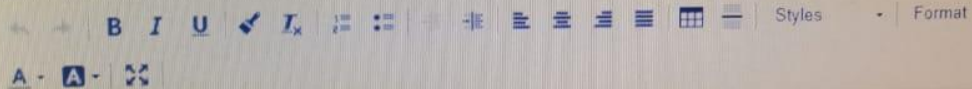
Answer



Question No : 49 of 50

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

Answer



Question No : 43 of 50

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




Question No : 44 of 50

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

Answer

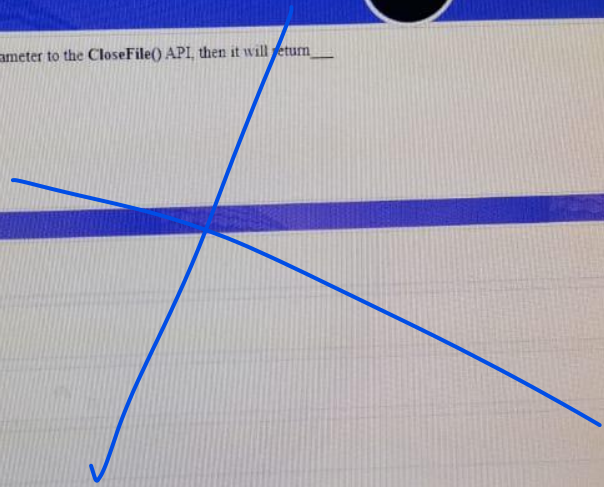



Question No : 2 of 50

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

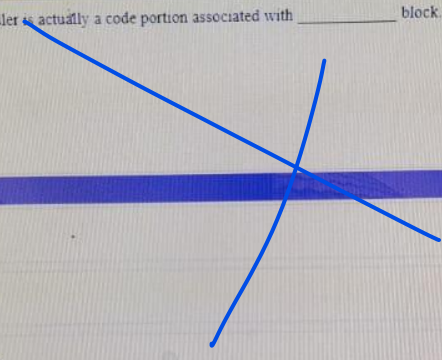


Question No : 3 of 50

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

Answer

- `_try`
- `_catch`
- `_except`
- `_finally`



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

Flag

First

Question No : 9 of 50

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

Answer

GetCurrentProcess()

OpenProcess()

CreateProcess()

GetCurrentProcessId()

Flag

Flag

First

Question No : 6 of 50

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

Answer

Useful

Meaningless

Necessary

Optional

Finish Exam

Flag

First

Question No : 5 of 50

The filter function _____ the type of an exception.

Answer

Identifies

Evaluates

Restricts

Excludes

Finish Exam

Flag

First

Question No : 7 of 50

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

Answer

- 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

Question No : 4 of 50

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

Answer

- 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 : 11 of 50

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



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

Finish Exam

Flag

First

Question No : 14 of 50

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

Finish Exam

Flag

Question No : 12 of 50

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

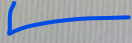
Answer

0

1

2

4



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_____ API creates thread handle from a thread ID.

Answer

`GetThreadId()`

`GetCurrentThreadId()`

`GetCurrentThread()`

`OpenThread()`



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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

Finish Exam Flag First Last

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Question No : 18 of 50 Marks: 1

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

Finish Exam Flag First Last

Question No : 20 of 50

A fiber can obtain its identify by calling _____ API.

Answer

GetCurrentFiber()

GetFiberData()

GetFiberId()

GetFiberIdentity()

Finish Exam

Flag

First

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Which of the following is not a thread model?

Answer

Boss worker

Client-server

Pipeline

Peer to peer

Finish Exam

Flag

First

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

Finish Exam

Back

Next

Flag

First

Last

Question No : 21 of 50

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

Answer

Context switch

Hold and wait condition

Sleeping condition

Deadlock condition

Finish Exam

Flag

First

Last

Question No : 23 of 50

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

Answer

Only one

Several

Exactly ten

At unspended

Finish Exam

Flag

First

Last

Question No : 26 of 50

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

Answer

checksum

checkdiv

checksub

checksum

Flag

First

Last

Question No : 22 of 50

Mark

The use of _____ ensures 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

Question No : 29 of 50

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

Finish Exam

Flag

First

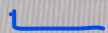
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Producer consumer problem is a classical problem in _____.

Answer

multi excision

mutual process

mutual exclusion 

object excision

Finish Exam

Flag

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 : 28 of 50

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

Answer

- sections
- timers
- handles
- self-loops

Question No : 31 of 50

Which of the following synchronization construct is used for semaphore?

Answer

Enter

Leave

Wait

Set

Question No : 32 of 50

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

Question No : 30 of 50

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

Answer

Critical Section

Mutex

Semaphore

Event

Question No : 33 of 50

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

Answer

3000

4000

5000

6000

Finish Exams

Flag

First

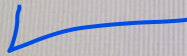
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Marks:

Optimal spin-count ensures _____

Answer

Less system calls



More system calls

More overheads

Critical Section overheads

Finish Exam

Flag

First

Last

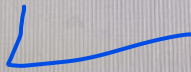
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A(n) _____ is a collection of worker threads that execute asynchronous callbacks on behalf of the application.

Answer

Address Space

Thread pool



Callback Functions

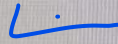
Environment Variables

Question No : 36 of 50

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

Answer

Callback functions



Kernel functions

Kernel routines

Work object code

Finish Exam

Flag

First

Last

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Log

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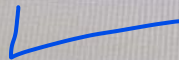
Marks: 1 (Tim

_____ indicates the processors configured on the system

Answer

Process Affinity Mask

Processor Affinity Mask



Thread Affinity Mask

Kernel Affinity Mask

First

Last

Prev

Question No : 37 of 50

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

Answer

System programmer

Kernel

BIOS

Loader

Finish Exam

Flag

First

Last

Question No : 38 of 50

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

Answer

Memory Management Unit

Device Driver

Processor Affinity

Loader

Finish Exam

Flag

First

Question No : 40 of 50

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Thread affinity mask is a subset of _____

Answer

Process Affinity Mask



Processor Affinity Mask

Thread Affinity Mask