Vendor: Microsoft

Exam Code: 70-483

Exam Name: Microsoft Programming in C#

Questions and Answers No.: 161-170 (231Q&As)

QUESTION 161
You are developing an application that will use multiple asynchronous tasks to optimize performance.
You create three tasks by using the following code segment. (Line numbers are included for reference only.)
You need to ensure that the ProcessTasks() method waits until all three tasks complete before continuing.
Which code segment should you insert at line 09?

```
01 protected void ProcessTasks()
02 {
03   Task[] tasks = new Task[3]
04   {
05     Task.Factory.StartNew(() => MethodA()),
06     Task.Factory.StartNew(() => MethodB()),
07     Task.Factory.StartNew(() => MethodC())
08   };
09
10   ...
11 }
```

A. `Task.WaitFor(3);`
B. `tasks.Yield();`
C. `tasks.WaitForCompletion();`
D. `Task.WaitAll(tasks);`

Answer: D

QUESTION 162
Hotspot Question
You are building a data access layer in an application that contains the following code:

```
public static Object GetTypeDefault(DbType dbDataType)
{
  switch (dbDataType)
  {
    case DbType.Boolean:
      return false;
    case DbType.DateTime:
      return DateTime.MinValue;
    case DbType.Decimal:
      return 0m;
    case DbType.Int32:
      return 0;
    case DbType.String:
      return String.Empty;
    default:
      return null;
  }
}
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

	Yes	No
If dbDataType is DateTime, today's date is returned.	○	
If dbDatatype is Int64, Null is returned.	○	
If dbDatatype is Double, 0 is returned.	○	

Answer:

	Yes	No
If dbDataType is DateTime, today's date is returned.	○	☐
If dbDatatype is Int64, Null is returned.	○	
If dbDatatype is Double, 0 is returned.	☐	○

QUESTION 163
You need to store the values in a collection.
The solution must meet the following requirements:
- The values must be stored in the order that they were added to the collection.
- The values must be accessed in a first-in, first-out order.
Which type of collection should you use?

A. SortedList
B. Queue
C. ArrayList
D. Hashtable

Answer: B

QUESTION 164
You need to write a console application that meets the following requirements:
- If the application is compiled in Debug mode, the console output must display Entering debug mode.
- If the application is compiled in Release mode, the console output must display Entering release mode.
Which code should you use?

A.
```
#if (TRACE)
  Console.WriteLine("Entering debug mode");
#else
  Console.WriteLine("Entering release mode");
#endif
```

B.
```
#if (DEBUG)
  Console.WriteLine("Entering debug mode");
#else
  Console.WriteLine("Entering release mode");
#endif
```

C.
```
if(System.Diagnostics.Debugger.IsAttached)
  Console.WriteLine("Entering debug mode");
else
  Console.WriteLine("Entering release mode");
```

D.
```
#region DEBUG
  Console.WriteLine("Entering debug mode");
#endregion
#region RELEASE
  Console.WriteLine("Entering release mode");
#endregion
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: B
Explanation:
When the C# compiler encounters an #if directive, followed eventually by an #endif directive, it will compile the code between the directives only if the specified symbol is defined.
Unlike C and C++, you cannot assign a numeric value to a symbol; the #if statement in C# is Boolean and only tests whether the symbol has been defined or not.
For example,
```
#define DEBUG
// ...
#if DEBUG
Console.WriteLine("Debug version");
#endif
```

QUESTION 165
An application contains code that measures reaction times.
The code runs the timer on a thread separate from the user interface.
The application includes the following code. (Line numbers are included for reference only.)
You need to ensure that the application cancels the timer when the user presses the Enter key.
Which code segment should you insert at line 14?

```
01 static int RunTimer(CancellationToken cancellationToken)
02 {
03   var time = 0;
04   while (!cancellationToken.IsCancellationRequested)
05     time++;
06   return time;
07 }
08 static void Main(string[] args)
09 {
10   var tokenSource = new CancellationTokenSource();
11   var task = Task.Factory.StartNew<int>(() => RunTimer(tokenSource.Token));
12   Console.WriteLine("Press [Enter] to stop the timer.");
13   Console.ReadLine();
14
15   Console.WriteLine("Timer stopped at {0}", task.GetAwaiter().GetResult());
16   Console.ReadLine();
17 }
```

A. `tokenSource.Token.Register( () => tokenSource.Cancel() );`
B. `tokenSource.Cancel();`
C. `tokenSource.IsCancellationRequested = true;`
D. `tokenSource.Dispose();`

Answer: B

QUESTION 166
You have the following code:

```
List<Int32> items = new List<int>() {
  100,
  95,
  80,
  75,
  95
};
```

You need to retrieve all of the numbers from the items variable that are greater than 80.
Which code should you use?

A.
```
var result = from i in items
  where i > 80
  select i;
```

B.
```
var result = from i in items
  groupby i into grouped
  where grouped.Key > 80
  select i;
```

C.
```
var result = items.Take(80);
```

D.
```
var result = items.Skip(80);
```

A. Option A
B. Option B
C. Option C

D. Option D

Answer: A

QUESTION 167
You have the following class (line numbers are included for reference only):

```
01 public class Class1
02 {
03   private String value = String.Empty;
04   private ServiceProxy proxy = new ServiceProxy();
05
06   public String Value
07   {
08     get {return value;}
09   }
10   public void Modify(Object newValue)
11   {
12
13     value += proxy.Update(newValue.ToString());
14   }
15 }
16 public class Test
17 {
18   public void Execute()
19   {
20     Class1 class1 = new Class1();
21     (new ParameterizedThreadStart(class1.Modify)).Invoke(1);
22     (new ParameterizedThreadStart(class1.Modify)).Invoke(2);
23     (new ParameterizedThreadStart(class1.Modify)).Invoke(3);
24     Console.WriteLine(class1.Value);
25   }
26 }
```

ServiceProxy is a proxy for a web service.
Calls to the Update method can take up to five seconds.
The Test class is the only class the uses Class1.
You run the Execute method three times, and you receive the following results:
213
312
231
You need to ensure that each value is appended to the Value property in the order that the Modify methods are invoked.
What should you do?

A. Insert the following at line 5:
```
Object obj1 = new Object();
```
Insert the following at line 12:
```
Monitor.Enter(obj1);
```

B. Insert the following at line 5:
```
Object obj1 = new Object();
```
Insert the following at line 12:
```
lock (obj1)
```

C. Insert the following at line 12:
```
Monitor.Enter(this);
```

D. Insert the following at line 12:
```
lock (value)
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: B

QUESTION 168
You are creating a class library that will be used in a web application.
You need to ensure that the class library assembly is strongly named.
What should you do?

A. Use the gacutil.exe command-line tool.
B. Use the xsd.exe command-line tool.
C. Use the aspnet_regiis.exe command-line tool.
D. Use assembly attributes.

Answer: D
Explanation:
The Windows Software Development Kit (SDK) provides several ways to sign an assembly with a strong name:
- Using the Assembly Linker (Al.exe) provided by the Windows SDK.
- Using assembly attributes to insert the strong name information in your code.
You can use either the AssemblyKeyFileAttribute or the AssemblyKeyNameAttribute, depending on where the key file to be used is located.
- Using compiler options such /keyfile or /delaysign in C# and Visual Basic, or the /KEYFILE or /DELAYSIGN linker option in C++. (For information on delay signing, see Delay Signing an Assembly.)

Note:
- A strong name consists of the assembly's identity--its simple text name, version number, and culture information (if provided)--plus a public key and a digital signature. It is generated from an assembly file (the file that contains the assembly manifest, which in turn contains the names and hashes of all the files that make up the assembly), using the corresponding private key. Microsoft®Visual Studio®.NET and other development tools provided in the .NET Framework SDK can assign strong names to an assembly.
Assemblies with the same strong name are expected to be identical.

QUESTION 169
Drag and Drop Question
You have an application that uses paging.
Each page displays 10 items from a list.
You need to display the third page. (Develop the solution by selecting and ordering the required code snippets. You may not need all of the code snippets.)

Answer:

QUESTION 170

You are implementing a method named FloorTemperature that performs conversions between value types and reference types.

The following code segment implements the method. (Line numbers are included for reference only.)

You need to ensure that the application does not throw exceptions on invalid conversions.

Which code segment should you insert at line 04?

```
01 public static void FloorTemperature(float degrees)
02 {
03   object degreesRef = degrees;
04
05   Console.WriteLine(result);
06 }
```

A. `int result = (int)degreesRef;`
B. `int result = (int)(double)degreesRef;`
C. `int result = degreesRef;`
D. `int result = (int)(float)degreesRef;`

Answer: D