Exam : **070-513**

Title : TS: Windows Communication Foundation Development with Microsoft.NET Framework 4

Version : DEMO

1.You are creating a Window s Communication Foundation (WCF) service application.The application needs to service many clients and requests simultaneously.
The application also needs to ensure subsequent individual client requests provide a stateful conversation.
You need to configure the service to support these requirements.
Which attribute should you add to the class that is implementing the service?
A.[ServiceBehavior (InstanceContextMode =
InstanceContextMode.PerSession,
ConcurrencyMode = ConcurrencyMode.Single)]
B.[ServiceBehavior (InstanceContextMode =
InstanceContextMode.PerCall,
ConcurrencyMode = ConcurrencyMode.Reentrant)]
C.[ServiceBehavior (InstanceContextMode =
InstanceContextMode.PerSession,
ConcurrencyMode = ConcurrencyMode.Multiple)]
D.[ServiceBehavior (InstanceContextMode =
InstanceContextMode.PerCall,
ConcurrencyMode = ConcurrencyMode.Multiple)]
Answer: C

2.A service implements the following contract.(Line numbers are included for reference only.)

```
01 [ServiceContract(SessionMode = SessionMode.Required)]
02 public interface IContosoService
03 {
04    [OperationContract(IsOneWay = true, IsInitiating = true)]
05    void OperationOne(string value);
06
07    [OperationContract(IsOneWay = true, IsInitiating = false)]
08    void OperationTwo(string value);
09 }
```

The service is implemented as follows.

```
20 class ContosoService : IContosoService
21 {
22    public void OperationOne(string value) { … }
23
24    public void OperationTwo(string value) { … }
25 }
```

ContosoService uses NetMsmqBinding to listen for messages.The queue was set up to use transactions for adding and removing messages.
You need to ensure that OperationOne and OperationTwo execute under the same transaction context when they are invoked in the same session.
What should you do?
A.Insert the following attribute to OperationOne on IContosoService.
[TransactionFlow(TransactionFlowOption.Mandatory)]
Insert the following attribute to OperationTwo on IContosoService.

[TransactionFlow(TransactionFlowOption.Mandatory)]
B.Insert the following attribute to OperationOne on ContosoService.
[OperationBehavior(TransactionScopeRequired = true,
TransactionAutoComplete = false)]
Insert the following attribute to OperationTwo on ContosoService.
[OperationBehavior(TransactionScopeRequired = true,
TransactionAutoComplete = true)]
C.Add the following XML segment to the application config file in the system.serviceModel/bindings configuration section.

```
<netMsmqBinding>
        <binding name="contosoTx" durable="true" receiveContextEnabled="true" />
</netMsmqBinding>
```

Then use the NetMsmqBinding named contosoTx to listen for messages from the clients.
D.Add the following XML segment to the application config file in the system.serviceModel/bindings configuration section.

```
<customBinding>
      <binding name="contosoTx">
          <transactionFlow />
              <binaryMessageEncoding />
          <msmqTransport durable="true" />
       </binding>
 </customBinding>
```

Then use the CustomBinding named contosoTx to listen for messages from the clients.
Answer: B

3.A Windows Communication Foundation (WCF) solution exposes the following service over a TCP binding.(Line numbers are included for reference only.)

```
01    [ServiceContract]
02    [ServiceBehavior(ConcurrencyMode =   ConcurrencyMode.Multiple)]
03    public class DataAccessService
04    {
05       [OperationContract]
06       public void PutMessage(string message)
07       {
08          MessageDatabase.PutMessage(message);
09       }
10       [OperationContract]
11       public string[] SearchMessages(string search)
12       {
13          return MessageDatabase.SearchMessages(search);
14       }
15    }
```

MessageDatabase supports a limited number of concurrent executions of its methods.
You need to change the service to allow up to the maximum number of executions of the methods of

MessageDatabase.This should be implemented without preventing customers from connecting to the service.

What should you do?

A.Change the service behavior as follows.

[ServiceBehavior(ConcurrencyMode = ConcurrencyMode.Multiple,
InstanceContextMode = InstanceContextMode.Single)]

B.Change the service behavior as follows.

[ServiceBehavior(ConcurrencyMode = ConcurrencyMode.Single,
InstanceContextMode = InstanceContextMode.PerSession)]

C.Add a throttling behavior to the service, and configure the maxConcurrentCalls.

D.Add a throttling behavior to the service, and configure the maxConcurrentSessions.

Answer: C

4.You are developing a Windows Communication Foundation (WCF) service that allows customers to update financial data.The service contract is defined as follows.(Line numbers are included for reference only.)

```
01  [ServiceContract]
02  public interface IDataUpdate
03  {
04    [OperationContract]
05    [TransactionFlow(TransactionFlowOption.Mandatory)]
06    void Update(string accountNumber, double amount);
07  }
08
09  class UpdateService : IDataUpdate
10  {
11    [OperationBehavior(TransactionScopeRequired = true,
       TransactionAutoComplete = false)]
12    public void Update(string accountNumber,
       double amount)
13    {
14      …
15    }
16  }
17
```

You need to ensure that the service is invoked within a transaction.

What should you do?

A.Replace line 01 with the following code.

[ServiceContract(
SessionMode = SessionMode.NotAllowed)]

B.Replace line 01 with the following code.

[ServiceContract(SessionMode = SessionMode.Required)]

C.Insert the following code at line 08.

[ServiceBehavior(
TransactionAutoCompleteOnSessionClose = false)]

D.Insert the following code at line 08.

[ServiceBehavior(
ReleaseServiceInstanceOnTransactionComplete = false)]
Answer: B

5.You are developing a Windows Communication Foundation (WCF) service that is hosted by a Windows Forms application.
The ServiceHost instance is created in the Form constructor.
You need to ensure that the service is not blocked while the UI thread is busy.
What should you do?
A.Decorate the service implementation class with the following line of code.
[ServiceBehavior(
UseSynchronizationContext = false)]
B.Decorate the service implementation class with the following line of code.
[ServiceBehavior(
ConcurrencyMode = ConcurrencyMode.Multiple)]
C.Call the Invoke method of the form and supply a delegate.s
D.Call the BeginInvoke method of the form and supply a delegate.
Answer: A

6.You develop a Windows Communication Foundation (WCF) service that employees use to access bonus information.You define the following service contract.(Line numbers are included for reference only.)

```
01  [ServiceContract(SessionMode = SessionMode.Required)]
02  public interface IFinancialService
03  {
04      [OperationContract]
05      string Login(int employeeID, string passwordHash);
06
07      [OperationContract]
08      double GetBonus(int month);
09
10      [OperationContract(IsTerminating = true)]
11      void Logout();
12 }
```

Client applications can invoke methods without logging in.
You need to ensure that the client applications invoke Login before invoking any other method.
You also need to ensure that client applications cannot consume the service after invoking Logout.
Which two actions should you perform? (Each correct answer presents part of the solution.Choose two.)
A.Replace line 04 with the following code.
[OperationContract(IsInitiating = false)]
B.Replace line 04 with the following code.
[OperationContract(IsInitiating = true, IsTerminating = true)]
C.Replace line 07 with the following code.
[OperationContract(IsInitiating = false)]

D.Replace line 10 with the following code.
[OperationContract(IsInitiating = false,
IsTerminating = true)]
Answer: C, D

7.You develop a Windows Communication Foundation (WCF) service that interacts with Microsoft Message Queuing (MSMQ).
The service requires sessions.You need to create a custom binding that enables messages sent to the queue to be viewed when you are using a listener tool.
Which binding elements should you use?
A.textMessageEncoding and msmqTransport in this order
B.textMessageEncoding and msmqIntegrationTransport in this order
C.msmqTransport and textMessageEncoding in this order
D.msmqIntegrationTransport and textMessageEncoding in this order
Answer: A

8.You are creating a Windows Communication Foundation (WCF) service.The service endpoints change frequently.
On the service, you add a new ServiceDiscoveryBehavior to the Behaviors collection of the ServiceHost Description property.
You need to ensure that client applications can communicate with the service and discover changes to the service endpoints.
What should you do?
A.Add a new ServiceDiscoveryBehavior to the Behaviors collection in the client application.
B.Add a new AnnouncementClient to the Behaviors collection in the client application.
C.Use the FindCriteria class and the UdpDiscoveryEndpoint class to set up the binding in the client application.
D.Use the DiscoveryProxy class and the EndpointDiscoveryMetadata class to set up the binding in the client application.
Answer: C

9.You are developing an application to update a users social status.You need to consume the service using Windows Communication Foundation (WCF).
The client configuration is as follows.

```
<system.serviceModel>
    <bindings>
        <webHttpBinding>
            <binding name="SocialConfig">
                <security mode="TransportCredentialOnly">
                <transport clientCredentialType="Basic"
                realm="Social API" />
            </security>
        </binding>
    </webHttpBinding>
```

```
        </bindings>
      <client>
            <endpoint address="http://contoso.com"
                                    binding="webHttpBinding"
                                     bindingConfiguration="SocialConfig"
                                     contract="ISocialStatus"
                                      name="SocialClient" />
    </client>
</system.serviceModel>
```

The service contract is defined as follows.

```
 [ServiceContract] public interface ISocialStatus {
[OperationContract]
[WebInvoke(UriTemplate =
"/statuses/update.xml?status={text}")]
void UpdateStatus(string text);
}
```

Which code segment should you use to update the social status?

```
A.using (WebChannelFactory<ISocialStatus> factory =
 new WebChannelFactory<ISocialStatus>("SocialClient"))
{
factory.Credentials.UserName.UserName = user.Name;
factory.Credentials.UserName.Password = user.Password;
ISocialStatus socialChannel = factory.CreateChannel();
socialChannel.UpdateStatus(newStatus);
}
B.using (ChannelFactory<ISocialStatus> factory =
new WebChannelFactory<ISocialStatus>(typeof(ISocialStatus)))
{
factory.Credentials.UserName.UserName = user.Name;
factory.Credentials.UserName.Password = user.Password;
ISocialStatus socialChannel = factory.CreateChannel();
socialChannel.UpdateStatus(newStatus);
}
C.using (ChannelFactory<ISocialStatus> factory =
new ChannelFactory<ISocialStatus>("POST"))
{
factory.Credentials.Windows.ClientCredential.UserName =
user.Name;
factory.Credentials.Windows.ClientCredential.SecurePassword.
SetAt(0, Convert.ToChar(user.Password) );
ISocialStatus socialChannel = factory.CreateChannel();
socialChannel.UpdateStatus(newStatus); }
D.using (WebChannelFactory<ISocialStatus> factory =
new WebChannelFactory<ISocialStatus>(typeof(ISocialClient)))
```

{
factory.Credentials.Windows.ClientCredential.UserName =
user.Name;
factory.Credentials.Windows.ClientCredential.SecurePassword.
SetAt(0, Convert.ToChar(user.Password));
ISocialStatus socialChannel = factory.CreateChannel();
socialChannel.UpdateStatus(newStatus); }
Answer: A

10.You are developing a client application that uses the following code to consume a Windows Communication Foundation (WCF) service.(Line numbers are included for reference only.)
01 BasicHttpBinding myBinding = new BasicHttpBinding();
02 EndpointAddress myEndpointAddress =
new EndpointAddress(
"http://contoso.com/TaxService.svc");
03
04 ITaxService client = channelFactory.CreateChannel();
05 string data = client.GetData(1);
You need to consume the service.
Which code segment should you insert at line 03?
A.var channelFactory = new ChannelFactory<ITaxService>();
B.var channelFactory = new ChannelFactory<ITaxService>(
myBinding);
C.var channelFactory = new ChannelFactory<ITaxService>(
myBinding, myEndpointAddress);
D.var channelFactory = new ChannelFactory<ITaxService>(
"http://contoso.com/TaxService.svc");
Answer: C

11.You are developing a client application that consumes a Windows Communication Foundation (WCF) service.
You use the svcutil.exe utility to create a proxy for the service.
You use the svcutil.exe switches that generate asynchronous calls.GetFlight is a service operation that takes no parameters and returns a string.The GetFlightCallback method must be called when the service operation returns.
You create an instance of the client proxy with the following code.
var client = new TravelServiceClient();
You need to ensure that a callback is received when the GetFlight operation is called asynchronously.
Which code segment should you use?
A.client.BeginGetFlight(GetFlightCallback, null);
client.GetFlight();
B.client.GetFlight();
client.BeginGetFlight(GetFlightCallback, null);
C.client.GetFlightCompleted +=

```
            new EventHandler<GetFlightCompletedEventArgs>(
GetFlightCallback);
client.GetFlightAsync();
D.IAsyncResult asyncResult = client.BeginGetFlight(
          GetFlightCallback, client);
client.EndGetFlight(asyncResult);
```

Answer: C

12.A Windows Communication Foundation (WCF) solution uses the following contracts.(Line numbers are included for reference only.)

```
01 [ServiceContract(CallbackContract = typeof(INameService))]
02 public interface IGreetingService
03 {
04 [OperationContract]
05 string GetMessage();
06 }
07
08 [ServiceContract]
09 public interface INameService
10 {
11 [OperationContract]
12 string GetName();
13 }
```

When the client calls GetMessage on the service interface, the service calls GetName on the client callback.In the client, the class NameService implements the callback contract.

The client channel is created as follows.

```
22 In stanceContext callbackContext =
          new InstanceContext(new NameService("client"));
25 DuplexChannelFactory<IGreetingService> factory =
                new DuplexChannelFactory<IGreetingService>(
                      typeof(NameService), binding, address);
26 IGreetingService greetingService = factory.CreateChannel();
```

You need to ensure that the service callback is processed by the instance of NameService.

What are two possible ways to achieve this goal? (Each correct answer presents a complete solution.Choose two.)

A.Change line 25 to the following code segment.

```
   DuplexChannelFactory<IGreetingService> factory =
new DuplexChannelFactory<IGreetingService>(
            callbackContext, binding, address);
```

B.Change line 26 to the following code segment.

```
IGreetingService greetingService =
         factory.CreateChannel(callbackContext);
```

C.Add the following code segment after line 26.

```
 callbackContext.IncomingChannels.Add((IDuplexChannel)greetingService);
```

D.Add the following code segment after line 26.
callbackContext.OutgoingChannels.Add((IDuplexChannel)greetingService);
Answer: A, B

13.A Windows Communication Foundation (WCF) service has a callback contract.You are developing a client application that will call this service.
You must ensure that the client application can interact with the WCF service.
What should you do?
A.On the OperationContractAttribute, set the AsyncPattern property value to true.
B.On the OperationContractAttribute, set the ReplyAction property value to the endpoint address of the client.
C.On the client, create a proxy derived from DuplexClientBase<TChannel>.
D.On the client, use GetCallbackChannel<T>.
Answer: C

14.A Windows Communication Foundation (WCF) client application is consuming an RSS syndication feed from a blog.You have a SyndicationFeed variable named feed.The application iterates through the items as follows.(Line numbers are included for reference only.)
01 foreach (SyndicationItem item in feed.Items)
02 {
03 }
You need to display the content type and body of every syndication item to the console.
Which two lines of code should you insert between lines 02 and 03?
A.Console.WriteLine(item.Content.Type);
Console.WriteLine(((TextSyndicationContent)item.Content).Text);
B.Console.WriteLine(item.Content.GetType());
Console.WriteLine(((TextSyndicationContent)item.Content).Text);
C.Console.WriteLine(item.Content.Type); Console.WriteLine(item.Content.ToString());
D.Console.WriteLine(item.Content.GetType()); Console.WriteLine(item.Content.ToString());
Answer: A

15.You are creating a Windows Communication Foundation (WCF) service.
You have the following requirements:
Messages must be sent over TCP.
The service must support transactions.
Messages must be encoded using a binary encoding.
Messages must be secured using Windows stream-based security.
You need to implement a custom binding for the service.
In which order should the binding stack be configured?
A.tcpTransport
windowsStreamSecurity
transactionFlow
binaryMessageEncoding
B.transactionFlow

binaryMessageEncoding
windowsStreamSecurity
tcpTransport
C.windowsStreamSecurity
tcpTransport
binaryMessageEncoding
transactionFlow
D.binaryMessageEncoding
transactionFlow
tcpTransport
windowsStreamSecurity
Answer: B

16.A Windows Communication Foundation (WCF) application uses the following data contract.

```
[DataContract]
public class Person
{
  [DataMember]
  public string firstName;
  [DataMember]
  public string lastName;
  [DataMember]
  public int age;
  [DataMember]
  public int ID;
}
```

You need to ensure that the following XML segment is generated when the data contract is serialized.

```
<Person>
  <firstName xsi:nil="true"/>
  <lastName xsi:nil="true"/>
  <ID>999999999</ID>
</Person>
```

Which code segment should you use?
A.[DataMember]
public string firstName;
[DataMember]
public string lastName;
[DataMember(EmitDefaultValue = true)]
public int age = 0 ;
[DataMember(EmitDefaultValue = true)]
public int ID = 999999999;
B.[DataMember(EmitDefaultValue = false)]
public string firstName = null;
[DataMember(EmitDefaultValue = false)]
public string lastName = null;
[DataMember(EmitDefaultValue = true)]

public int age = -1;
[DataMember(EmitDefaultValue = false)]
public int ID = 999999999;
C.[DataMember(EmitDefaultValue = true)]
public string firstName;
[DataMember(EmitDefaultValue = true)]
public string lastName;
[DataMember(EmitDefaultValue = false)]
public int age = -1;
[DataMember(EmitDefaultValue = false)]
public int ID = 999999999;
D.[DataMember]
public string firstName = null;
[DataMember] public string lastName = null;
[DataMember(EmitDefaultValue = false)] public int age = 0;
[DataMember(EmitDefaultValue = false)]
public int ID = 999999999;
Answer: D

17.You are developing a Windows Communication Foundation (WCF) service.
The service operation takes a customer number as the only argument and returns information about the customer.
The service requires a security token in the header of the message.
You need to create a message contract for the service.
Which code segment should you use?
A.[ServiceContract]
public interface IService
{
[OperationContract]
CustomerInformation GetCustomerInformation(Header header,
int customerNumber);
}
[DataContract]
public class CustomerInformation
{
…….
}
[MessageContract]
public class Header { [MessageHeader] public string SecurityTag;
}
B.[ServiceContract]
public interface IService
{ [OperationContract]
CustomerInformation GetCustomerInformation(Header header,

int customerNumber);
} [MessageContract] public class CustomerInformation { } [MessageContract] public class Header { [MessageHeader] public string SecurityTag; }
C.[ServiceContract]
public interface IService {
[OperationContract]
CustomerInformation GetCustomerInformation(CustomerNumber request);
}
[DataContract]
public class CustomerInformation { } [MessageContract] public class CustomerNumber { [MessageHeader]
public string SecurityTag; [MessageBodyMember] public int CustomerNumberElement; }
D.[ServiceContract]
public interface IService
{
[OperationContract]
CustomerInformation GetCustomerInformation(
CustomerNumber request);
}
[MessageContract]
public class CustomerInformation
{
……
}
[MessageContract] public class CustomerNumber
{
[MessageHeader]
public string SecurityTag;
[MessageBodyMember]
public int CustomerNumberElement;
}
Answer: D

18.A Windows Communication Foundation (WCF) solution uses two services to manage a shopping cart.Service A processes messages containing line items that total between $0 and $500.Service B processes messages containing line items that total more than $500.
All messages are of equal importance to the business logic.
You need to route incoming messages to the appropriate services by using WCF routing.
Which two message filters should you add to the router? (Each correct answer presents part of the solution.Choose two.)
A.a message filter with a priority of 100 that will forward messages that total between $0 and $500 to Service A
B.a message filter with a priority of 0 that will forward messages that total between $0 and $500 to Service A

C.a message filter with a priority of 0 that will forward all messages to Service B
D.a message filter with a priority of 100 that will forward all messages to Service B
Answer: A, C

19.You are developing a data contract for a Windows Communication Foundation (WCF) service.
The data in the data contract must participate in round trips.Strict schema validity is not required.
You need to ensure that the contract is forward-compatible and allows new data members to be added to it.
Which interface should you implement in the data contract class?
A.ICommunicationObject
B.IExtension<T>
C.IExtensibleObject<T>
D.IExtensibleDataObject
Answer: D

20.Your company has a Windows Communication Foundation (WCF) service at the URL http://services.contoso.com/OrderLookupService.svc.

The <system.serviceModel> section of the configuration file is as follows.(Line numbers are included for reference only.)

```
01  <system.serviceModel>
02          <behaviors>
03                  <serviceBehaviors>
04                          <behavior>
05                                  <serviceDebug
                                            includeExceptionDetailInFaults="false"/>
06
07                                          </behavior>
08                                  </serviceBehaviors>
09                          </behaviors>
10                  <serviceHostingEnvironmentmultipleSiteBindingsEnabled="true" />
11              </system.serviceModel>
```

You need to ensure that the service publishes the WSDL description at http://services.contoso.com/OrderLookupService.svc?wsdl.
What should you do?
A.Change the serviceDebug element at line 05 as follows.

```
<serviceDebug includeExceptionDetailInFaults="true"/>
```

B.Insert the following element at line 06.

```
<serviceDiscovery>
    <announcementEndpoints>
        <endpoint name="wsdlAnnouncement"          kind="udpAnnouncementEndpoint" />
            </announcementEndpoints>
```

</serviceDiscovery>

C.Insert the following element at line 06.

<serviceMetadata httpGetEnabled="true" />

D.Insert the following element at line 06.

<serviceMetadata httpGetEnabled="false" />

Answer: C