

1. How to self host from 4 options u have to select the right code  
Hint: the correct answer will be like this example check the options properly

```
Uri httpUrl = new
Uri ("http://localhost:8090/MyService/SimpleCalculator");

ServiceHost host
= new ServiceHost (typeof (MyCalculatorService.SimpleCalculator)
```

2. Encoding used in WSHttpBinding?
- a. Encrypted
  - b. Text
  - c. Binary
  - d. Hex
3. SOAP Faults are conveyed using FaultException object. **True** or False?
4. WCF uses only Http as transport protocol. True or **False?**
5. What are the properties of EndPointAddress class?
- a. URI
  - b. Location
  - c. Identity

(URI, Address Header and identity )

6. What happens when Exception occurs in a Singleton service? (ANS; .....continuous running  
.....for correct total sentence check in msdn)

7. SOAP faults are conveyed to client which attributes are used in the class?

System.ServiceModel.FaultContractAttribute

8. When u specify binding as BasicHttpBinding what all things are involved in it?

- a. Transport =
- b. Security =
- c. Encoding =
- d. mixed

9. Which class is used by client to create a proxy for requesting the web service?

**Ans: ClientBase**

10. Which class provides the details about web services?

- a. ServiceDescription
- b. ServiceCredentials
- c. EndPointCollection
- d. EndPointAddress

11. For hosting a wcf service in ws, where we have to place the service

- a. .SVC file

- b. .msmq file
12. Which binding is used when the service needs transaction, message passing through named pipes, security?
- a. NetMsmqbinding
  - b. Netnamedpipesbinding
  - c. WSHttpbinding
  - d. BasicHttpBinding
13. All SOAP faults that client can expect to receive in normal course of an application is with ---- attribute?

**FaultContractAttribute**

14. How to integrate error handling into services?

Ans: a. Map exception conditions to custom SOAP faults.

b. Clients and services send and receive SOAP faults as exceptions.

15. Which class is used to return any **untyped** faults to return to client?

Ans: FaultException

16. How to convert the data to and from a wcf service into XML format?

Ans: XmlSerializer

17. Which interface is used to control the behavior of application when an exception is thrown

Ans: System.ServiceModel.Dispatch.IErrorHandler

18. Question like how to add default endpoint

ANS: AddDefaultEndpoint

19. Question like For **ASMX** which binding will be used

ANS: BasicHttpBinding

20. Unlike binary which will support interoperability (check the answer in masdn)

- a. MTOM
- b. WSHttp
- c.
- d.

Note : Message Transmission Optimization Mechanism (**MTOM**) message encoding with a **WSHttpBinding**. MTOM is a mechanism for transmitting large binary attachments with SOAP messages as raw bytes, allowing for smaller messages.

21.question on Duplex service

22.persession with exception (find it in msdn)

23.WCF uses MSMQ **True** or False

Note : Message Queuing (MSMQ) application can send an MSMQ message to a Windows Communication Foundation (WCF) service.

24.Questions on service attribute

Contracts

Bindings

End points

wcftutorail.net

**Q.1)** Each method of a service contract that you want to expose should be tagged with the \_\_\_\_\_ attribute.

- **OperationContract**

**Note:** WCF uses an opt-in model to define what belongs to one of its contracts. In a service contract interface, only **methods** decorated with [OperationContract] are exposed to the client.

**Q.2)** WCF uses the\_\_\_\_\_ namespace to convert objects into a stream of data for transmitting over the network.

- **System.Runtime.Serialization**

**Q.3)** How does a web service "advertise" the messages a client application can send it, and the responses the client application will receive?

- **WSDL Document**

**Explanation**

Web Services Description Language

**Q.4)** What class is used to create an Endpoint in code?

**ServiceHost**

**Q.5)** What are three standard mechanisms available for providing security to web services?

- **username/password pairs**
- **X509 Certificates**
- **Kerberos tokens**

**Q.6)** What attribute tag is used to indicate a function is available for client use?

**OperationContract**

---

**Q.7)** What information is contained in a service definition file? When is it used?

**Explanation**

A service definition file is required when a WCF service is hosted by IIS. It **specifies the name of the class** that IIS will execute and the **name of the assembly** holding this class.

**Q.8)** What namespace contains the classes, enumerations, and interfaces necessary to build WCF service and client applications?

- **System.ServiceModel**

**Q.9)** You use the \_\_\_\_\_ attribute to mark the interface as a service contract.

- **ServiceContract**

**Q.10)** What class is used to create a channel between the client and the server?

- **ChannelFactory**

**Q.11)** The \_\_\_\_\_ attribute identifies the class as defining a type that can be serialized and deserialized as an XML stream by WCF.

- **DataContract**

**Note:** A *data contract* is a formal agreement between a service and a client that abstractly describes the data to be exchanged. That is, to communicate, the client and the service do not have to share the same types, only the same data contracts. A data contract precisely defines, for each parameter

or return type, what data is serialized (turned into XML) to be exchanged.

**Q.12)** Any member of a DataContract object not tagged with the \_\_\_\_\_ attribute will not be serializable.

- **DataMember**

Note: The [DataMemberAttribute](#) attribute must then be applied to each member of the data contract type to indicate that it is a **data member**, that is, it should be serialized

**Q.13)** What are the ABC's of a WCF Endpoint?

**Explanation**

Address: Where the service resides;

Binding: Protocol, encoding and security;

Contract: Interface describing what services are available

**Q.14)** What two properties are required when creating a new ChannelFactory?

- **Binding and Endpoint Address (no need of contract---client side)**

**Q.15)** A service contract should be defined by using a/an \_\_\_\_\_ rather than a class, as this enables you to separate the definition of the contract from its implementation.

- **Interface**

**Q.16)** A \_\_\_\_\_ specifies the details of products that the WCF service can pass to operations.

- **Data contract**

**Q.17)** The \_\_\_\_\_ assembly contains namespaces and types that you can use to manage security and identity information, helping to protect a WCF service.

- **System.IdentityModel**

**Q.18)** You can apply the DataContract attribute to which of the following objects?

- A. Classes (Missed)
- B. Structures (Missed)
- C. Enumerations (Missed)
- D. Interfaces
- E. Collections
- F. Types

**Q.19)** A \_\_\_\_\_ defines the operations that the WCF service will implement.

- **Service contract**

**Q.20)** A service definition file has the same name as the \_\_\_\_\_ .

- **Web service**

**Q.21)** By what mechanism do client and server applications communicate the format of the XML data they will exchange?

- **Schema**

**Q.22)** What mechanism is used to define what functions are available to the client?

- **Interface**

**Q.23)** How is the endpoint determined for WCF services hosted by IIS?

**Explanation**

IIS uses a URL containing the name of the virtual directory holding the service and the name of the .svc file as the endpoint.

**Q.24)** What three elements are present in every WCF Endpoint?

- **Address, Binding, Contract**

**Q.25)** It's actually not required to use the interface method for defining service contracts.

**A.** True (Correct Answer)

**B.** False

**Q.26)** What are the two ways of adding an Endpoint to a WCF service?

- **Configuration file**
- **ServiceHost**

**Q.27)** A service definition file has a \_\_\_\_\_ prefix.

- **SVC**

**Q.28)** If you define additional methods in the WCF service that are not in the the service contract, these methods will not be visible to client applications using the service.

**A.** True (Correct Answer)

**B.** False

**Q.29)** What attribute tag is used to indicate an interface can be exposed for client use?

- **ServiceContract**

**Q.30)** What are the "Four Tenets of Service Orientation"?

1. Boundaries are explicit;
2. Services are autonomous;
3. Services share schemas and contracts, not classes or types;
4. Compatibility is based on policy.

1.The metadata behavior that **ServiceMetadataBehavior** implemented controls whether the Service publishes metadata.

2. **MsmqIntegrationBinding** - Cross-machine communication between WCF applications & existing MSMQ applications.

3.per-call operation and exception occurs: wht happens

5.Encodings used ?

- a. Text
- b. Binary

6.SOAP Faults are conveyed using FaultException object. True or False?

7..What are the properties of EndPointAddress class?

- d. URI
- e. Identity

9.When u specify binding as BasicHttpBinding what all things are involved in it?

Transport  
Mixed  
Message  
Protocol  
(my choice: Transport,Mixed,Message)

special requirements to either customize the response message to the client when an application-level exception happens or perform some custom processing after the response message is returned, implement the [System.ServiceModel.Dispatcher.IErrorHandler](#) interface.

Ans: System.ServiceModel.Dispatch.IErrorHandler

12. WCF uses \_\_\_\_\_ translate classes into xml for communication and back to class at the reciever's end.  
DataContractSerializer

13. <endpoint> element :

-An endpoint address is represented in Web Services Description Language (WSDL) as a WS-Addressing **EndpointReference** (EPR) element inside the corresponding endpoint's **wsdl:port** element.

14. <http://www.fabrikam.com:322/mathservice.svc/secureEndpoint> :Transport Scheme is:  
http

15.Undeclared SOAP faults are :

**-FaultContractAttribute**

16. the attributes present in DataContract

DataContract  
DataMember

User defined object are explicit or Complex type, for which you have to define a Data contract using [DataContract] and [DataMember] attribute.

#### 17.operation contract properties

Ans:

A).action, asyncpattern, hasprotectionlevel, isoneway, isinitiating, isterminating,protectionlevel,replyaction

B).operation contract in WCF is similar to the web method in web service

c)definition of [OperationContract action=true,IsOneWay=true,..]

#### 18.deploy the service to IIS

a).precompiled .dll file located in global assembly cache

b).uncompiled-App-code file

c).uncompiled-.svc file

#### 19. client will send a request to the server and does not care whether it is success or failure of service execution

ANs : One way

#### 20.To create a service hosted by IIS :

<http://msdn.microsoft.com/en-us/library/ms733766.aspx>

1. Create a new file named "service.svc" in the application directory. Edit this file by adding the following @ServiceHost element.  
<%@ServiceHost language=c# Debug="true"  
Service="Microsoft.ServiceModel.Samples.CalculatorService"%>
2. Create an App\_Code subdirectory within the application directory.
3. Create a code file named Service.cs in the App\_Code subdirectory.

#### 21.Duplex operation concept:

<http://msdn.microsoft.com/en-us/library/ms731064.aspx>

-A duplex service contract is a message exchange pattern in which both endpoints can send messages to the other independently

-To create a duplex contract you create a pair of interfaces

#### 22. SOAP ,FaultContract,FaultException

Decorate the service operation with the FaultContract attribute

Two types of SOAP faults can be sent: *declared* and *undeclared*. Declared SOAP faults are those in which an operation has a [System.ServiceModel.FaultContractAttribute](#) attribute that specifies a custom SOAP fault type. *Undeclared* SOAP faults are not specified in the contract for an operation.

#### 25.\_\_\_\_\_ and \_\_\_\_\_ methods should be included in all Service Contract interface.

-Onend(),OnStart(),-OnClose(),-Onterminate(),OnInitiate()

(my choice: Onstart(),OnClose() )



Q.1) What three pieces of information does the endpoint contain?

1. The address of the service;
2. The binding supported by the service;
3. The contract implemented by the service.

Q.2) Which part of the endpoint may include the service definition file?

- A. Address (Correct Answer)
- B. Binding
- C. Contract

Q.3) In which part of the endpoint would you expect to find the transport protocol?

- A. Address
- B. Binding (Correct Answer)
- C. Contract

WCF has built-in support for HTTP, HTTPS, TCP, named-pipes and message queues.

Q.4) In which part of the endpoint would you expect to find the encoding format of the messages?

- A. Address
- B. Binding (Correct Answer)
- C. Contract

Binary encoding may be necessary if you have transmitting images or handling streams.

Q.5) In which part of the endpoint would you expect to find the security requirements of the service?

- A. Address
- B. Binding (Correct Answer)
- C. Contract

Security can be implemented at both the transport level and the message level.

Q.6) In which part of the endpoint would you expect to find the transactional requirements of the service?

- A. Address
- B. Binding (Correct Answer)
- C. Contract

Such transactional functionality may ensure that multiple related requests made of the server are either all completed successfully or all canceled.

Q.7) In which part of the endpoint would you expect to find the implementation contract?

- A. Address
- B. Binding
- C. Contract (Correct Answer)

Q.8) A WCF service contract is an interface stored in a .NET Framework assembly and annotated with the \_\_\_\_\_ attribute.

- **ServiceContract**

Q.9) The service contract describes the operations implemented by the service by tagging them with the \_\_\_\_\_ attribute.

- **OperationContract**

Q.10) Any data passed to and from operation must be \_\_\_\_\_.

- **Serializable**

Q.11) A service can respond to requests from multiple client applications simultaneously.

- A. True (Correct Answer)
- B. False

Q.12) A service responds to requests from multiple client applications in the order in which they are received.

- A. True (Your Answer)
- B. False (Correct Answer)

A service can respond to requests from multiple client applications simultaneously.

Q.13) • A/n \_\_\_\_\_ is responsible for handling one aspect of message processing, as specified by the findings of a service. **Channel**

Q.14) • The WCF runtime composes channel into a/n \_\_\_\_\_ **channel stack**

\_\_\_\_\_.

All messages passing between the client and the service go through each channel in the channel stack.

- Q.15)** The channel stack operates in \_\_\_\_\_ directions. **Two**  
 Messages received from clients across the network proceed up the channel stack to the service and response messages sent back from the service traverse the channel stack in the opposite direction back to the network and then to the client.
- Q.16)** If a channel cannot process a message it reports an error and the message is not processed any further.  
**A.** True (Correct Answer)  
**B.** False
- Q.17)** If a channel cannot process a message it reports an error and the message is directed to the exception channel.  
**A.** True  
**B.** False (Correct Answer)
- If a channel cannot process a message it reports an error and the message is not processed any further. Don't know what an exception channel is.
- Q.18)** The \_\_\_\_\_ channel always resides at the bottom of the stack and is the first channel to receive data from the network.  
 • **Transport**
- Q.19)** • The \_\_\_\_\_ channel always resides at the top of the channel stack. **Encoding**
- Q.20)** What two channels are mandatory and can be found in all channel stacks? **Transport and encoding**
- Q.21)** • When you start a service running, a \_\_\_\_\_ object is created for each address specified in the endpoint. **Listener**
- Q.22)** The WCF runtime creates a/n \_\_\_\_\_ object to control the interaction between the channel stack and the service instance.  
 • **InstanceContext**
- Q.23)** You modify the way in which the WCF runtime instantiates the service through the InstanceContext object by specifying the \_\_\_\_\_ attribute of the class implementing the service contract. **ServiceBehavior**
- Q.24)** A WCF client application can communicate with a WCF service by using a/n \_\_\_\_\_. **Proxy class**
- Q.25)** A proxy class implements a/n \_\_\_\_\_ on the client side. **Channel stack**
- Q.26)** To communicate successfully, the client and the service should use an equivalent \_\_\_\_\_ containing a compatible set of bindings. **Channel stack**

1)Binding:

The binding specifies how to communicate with the endpoint. This includes:

- The transport protocol to use (for example, TCP or HTTP).
- The encoding to use for the messages (for example, text or binary).
- The necessary security requirements (for example, SSL or SOAP message security).

2) The Client cannot expose endpoint to get a WCF service. True or **False**

True(doubt)

<http://msdn.microsoft.com/en-us/library/ms733821.aspx>

3)A program was given with Divide By Zero Exception. Asked correct syntax

```
public int Divide(int n1, int n2)
{
    try
    {
```

```

        return n1 / n2;
    }
    catch (DivideByZeroException)
    {
        MathFault mf = new MathFault();
        mf.operation = "division";
        mf.problemType = "divide by zero";
        throw new FaultException<MathFault>(mf);
    }
}

```

#### 4)Self hosting

```

Uri baseAddress = new Uri("http://localhost:8080/hello");
ServiceHost something here...
ServiceHost host = new ServiceHost(typeof(HelloWorldService), baseAddress);

```

Hint: Uri and typeof should be there in the syntax

#### 5) Deploying Service Implementation to the IIS Application

WCF services hosted in IIS use the same dynamic compilation model as ASP.NET 2.0. Just as with ASP.NET, you can deploy the implementation code for IIS-hosted WCF services in several ways at various locations, as follows:

- **As a precompiled .dll file located in the global assembly cache (GAC) or in the application's \bin directory.** Precompiled binaries are not updated until a new version of the class library is deployed.
- **As un-compiled source files located in the application's \App\_Code directory.** Source files located in this directory are dynamically required when processing the application's first request. Any changes to files in the \App\_Code directory cause the entire application to be recycled and recompiled when the next request is received.
- **As un-compiled code placed directly in the .svc file.** Implementation code can also be located inline in the service's .svc file, after the @ServiceHost directive. Any changes to inline code cause the application to be recycled and recompiled when the next request is received.

(Bold is the answer)

<http://msdn.microsoft.com/en-us/library/ms729846.aspx>

#### 6)For IIS hosting which file has to be passed

.svc(doubt) check with above link

#### 7)unlike binary which encoding is more interoperable

For encoding it is

MTOM

If they ask binding means wshttp, wsDualHttp,wsFederation

8) Which class is used to create a proxy

ClientBase Or DuplexClientBase (verify)

9) WCF uses \_\_\_\_\_ to serialize classes into xml documents and vice versa

Actually wcf uses both DataContractSerializer and XmlSerializer

Default is DataContractSerializer, and also it is fast. Better for small amount of data.

Also uses XmlSerializer which is better for large amount of data..

(Do Verify)

10)Endpoint contains

Uri property

Identity property

11)contract contains:

- The contract outlines what functionality the endpoint exposes to the client. A contract specifies:
  - What operations can be called by a client.
  - The form of the message.
  - The type of input parameters or data required to call the operation.
  - What type of processing or response message the client can expect
  -

12)One more question regarding <endpoint>element

The element <Endpoint> specifies binding, contract, and address properties for a service endpoint, which is used to expose services.

And more option... check in msdn

13) If endpoints are explicitly provided, the default endpoints can still be added by calling [AddDefaultEndpoints](#)

(If you have to add endpoint in service it is done by AddServiceEndpoint check this)

14) An endpoint address is represented in Web Services Description Language (WSDL) as a WS-Addressing **EndpointReference** (EPR) element inside the corresponding endpoint's **wsdl:port** element. The EPR contains the endpoint's address as well as any address properties. Note that the EPR inside **wsdl:port** replaces **soap:Address** as seen in the following example

## 15) Definition of an Endpoint Address

The address URI for most transports has four parts. For example, this URI, "http://www.fabrikam.com:322/mathservice.svc/secureEndpoint" has the following four parts:

- Scheme: http:
- Machine: www.fabrikam.com
- (Optional) Port: 322
- Path: /mathservice.svc/secureEndpoint

16) Wcf uses only http as transport protocol- False

17) Which binding is used when the service needs transaction, message passing through named pipes, security?

NetNamedPipesBinding

18) Undeclared Faults are thrown using generic FaultException : false

### Undeclared Faults

SOAP-based WCF services communicate errors using SOAP fault messages, or .NET managed exceptions. Therefore, the .NET managed exceptions are converted to a SOAP fault, passed to the client, and then translated back to a .NET managed exception.

Faults can be undeclared or declared, and all are strongly typed. Undeclared faults are not specified in the operation contract and should only be used for debugging. Undeclared faults return the exception message to the client exactly as it was raised in the Web service. To allow an undeclared fault, the config element's includeExceptionDetailInFaults attribute must be set to true, as shown below:

### [Copy Code](#)

```
<serviceDebug>
<behavior name="SilverlightFaultData.Web.Service1Behavior">
  <serviceMetadata httpGetEnabled="true" />
  <serviceDebug includeExceptionDetailInFaults="true" />
</behavior>
```

The sample application's Service1 uses this behavior, which then allows the exception to be converted automatically into a FaultException<ExceptionDetail>.

19) wshttpBinding contains:

Transport, message mixed

20) About FaultContract Attribute

21)types of hosting available in WCF

IIS hosting

Windows Activation Service

Self Hosting

22)how to start and end a WCF service..

Check with methods...

23)What are the attributes present in DataContract

DataContract

DataMember

24) Service Oriented Architecture is based on what principles

4 options

Service Bus

Contract Bus

Directory

The Application FrontEnd(except this option all are the answer)

Check..

25)Callback option is used in

Duplex service

<http://msdn.microsoft.com/en-us/magazine/cc163537.aspx>

26)encoding of WsHttpBinding

Text/xml

27)About ServiceContract Attribute

28) A binding that is suitable for cross-machine communication between a WCF application and existing Message Queuing (also known as MSMQ) applications.

## MsmqIntegrationBinding

Study these topics in msdn

Endpoints

Faults

Contracts

Bindings

1. WCF work with MSMQ-true or false
2. WCF work only with http-true or false
3. It is not possible for the client to expose the endpoint- true or false
4. How to create service contract?
  - A).operations are declared in service contract
  - B).operations are defined in service contract
  - c).operations are defined in operation contract
  - D).group operation declare with service contract attribute
  - E). group operation declare with operation contract attribute
5. System.servicemodel.dispatcher.ierrorhandler
6. Unlike binary, which encoding has high interoperability?  
Ans: MTOM encoding
7. NetNamedPipeBinding
8. How to integrate Error handling into service?
  - a.map exception conditions to custom soap faults
  - b.clients&services send and receive SOAP faults as exceptions
9. SOAP faults are conveyed to client, which attributes are used in the class  
Ans: fault contract
- 10.operation contract properties  
Ans:
  - A).action, asyncpattern, hasprotectionlevel, isoneway, isinitiating, isterminating,protectionlevel,replyaction
  - B).operation contract in WCF is similar to the web method in web service
  - c)[operation contract(protection level=protection level.encryptsign.isoneway=true.....)]
- 11.deploy the service to IIS  
Ans:
  - a).precompiled .dll file located in global assembly cache
  - b).uncompiled-App-code file
  - c).uncompiled-.svc file
- 12.Communication Exception is thrown when there is some recoverable communication error condition on either the service or client
- 13.undeclared fault contract, when the generic version of exception is thrown-true or false
- 14.operation contract-indicates that a method defines an operation that is part of a service contract in an application

15. specifies one or more SOAP fault are returned when service operation encounters processing error.

Ans: fault contract

16. Ans:

Try

```
{return n1/n2;
```

```
}
```

```
Catch(DivideByZeroException)
```

```
{
```

```
MathFault mf=new MathFault();
```

```
Mf.operation="division";
```

```
Mf.ProblemType="divide by zero";
```

```
Throw new faultexception<MathFault>(mf);
```

```
}
```

```
Catch(FaultException<MathFault> e)
```

```
{
```

```
Console.WriteLine("FaultException<MathFault>:mathfault while doing "+e.detail.operation+");
```

```
Client.abort();
```

```
}
```

17.<endpoint element>

a).collection of endpoint elements that is exposed to the service

b).the <service> contains endpoint

c).specifies binding,contract,address properties for service endpoint, which is exposed to service.

18. A service contract is a statement that provides information about:

- The grouping of operations in a service.
- The signature of the operations in terms of messages exchanged.
- The data types of these messages.
- The location of the operations.
- The specific protocols and serialization formats that are used to support successful communication with the service.

19.<system.servicemodel>namespace contains

a).extension

b).bindings

c).services

d).configuration

ans:b,c,d

20.what is the transport scheme in

<http://localhost:647/service.svc/>

http:

21.Finer grained control than role based

URI authorization

22.What are the attributes present in DataContract



DataContract

DataMember

If endpoints are explicitly provided, the default endpoints can still be added by calling [AddDefaultEndpoints](#)

23. host the service in web server

IIS

WAS

24. For IIS hosting which file has to be passed

.svc

25. Ans:

```
Uri baseAddress = new Uri("http://localhost:8080/hello");
ServiceHost something here...
ServiceHost host = new ServiceHost(typeof>HelloWorldService),
baseAddress);
```

Hint: Uri and typeof should be there in the syntax

26. Exception in Singleton services

Continues running

27. client will send a request to the server and does not care whether it is success or failure of service execution

ANs : One way

28. <Protocol mapping> section contains a list of transport protocol scheme mapped to binding types.

29. Encoding used in WSHttpBinding?

- c. Encrypted
- d. Text
- e. Binary
- f. Hex

30. Binding used for Cross communication across machines

NetTCP

Netpeer

Msmqintegration binding

31. Properties of Binding

Transport

Message

Protocol

32. <Endpoint address> contains

URI

Identity

33. Which binding supports MSMQ and transaction

MSMQIntegratedBinding

34. qn with what happens when there is session full

- a) Endpoint terminates session
- b) endpoint suspends session

- c) Communication exception occurs
- d) Fault exception occurs