



Question Bank

NET Centric Question 2076



Bachelor Level / Science

Full Marks: 60 + 20 + 20

Bsc. CSIT

Pass Marks: 24 + 8 + 8

NET Centric Computing

Time: 3 Hours

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all questions.

1. Answer the following questions in short.

a. ASP requirements

b. Client vs server-side script



c. ADO

d. VB Script

e. Error Handling

2. a. Differentiate between ASP and IIS.



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Best Answer of the Question

Answer the following questions in short.

- a. ASP requirements
- b. Client vs server-side script
- c. ADO
- d. VB Script
- e. Error Handling

Expert approved answer

a) ASP Requirements:

- ASP (Active Server Pages) is a server-side technology from Microsoft used for building dynamic web pages.
- To run ASP, you need a web server that supports ASP processing, such as Internet Information Services (IIS) on Windows servers.



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Best Answer of the Question

servers.

- The server must have ASP enabled, and the ASP pages should have a “.asp” extension.
- ASP scripts can be written in various languages like VBScript or JavaScript

b) Client vs. Server-Side Script:

- Client-side scripts run on the user's web browser (client) and are written in languages like JavaScript.
- They are executed on the client's machine, enabling dynamic interactions and validations on the user interface without contacting the server.
- Server-side scripts run on the web server and process requests from clients.
- They handle data processing, database operations, and generate dynamic content to be sent back to the client for display

c) ADO (ActiveX Data Objects):

- ADO (ActiveX Data Objects) is a data



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c) ADO (ActiveX Data Objects):

- ADO (ActiveX Data Objects) is a data access technology by Microsoft used to interact with databases.
- It allows developers to connect to databases, execute queries, and manipulate data using various programming languages like VBScript, JavaScript, C#, etc.
- ADO provides a set of objects and methods to work with data, including Connection, Command, Recordset, and more.

d) VBScript:

- VBScript (Visual Basic Scripting Edition) is a scripting language developed by Microsoft.
- It is designed to be lightweight and easy to use for automating tasks on Windows platforms.
- VBScript is often used for server-side scripting in classic ASP applications to handle data manipulation, validation, and



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Best Answer of the Question

- VBScript (Visual Basic Scripting Edition) is a scripting language developed by Microsoft.
- It is designed to be lightweight and easy to use for automating tasks on Windows platforms.
- VBScript is often used for server-side scripting in classic ASP applications to handle data manipulation, validation, and other server-side tasks.

e) Error Handling:

- Error handling is a programming technique used to manage unexpected errors or exceptions that may occur during the execution of a program.
- Error handling ensures that applications do not crash when encountering errors and provides meaningful feedback to users or logs errors for developers to debug and fix.



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Best Answer of the Question

- a. Differentiate between ASP and IIS.
- b. Explain the virtual directory properties.

Expert approved answer

a) Differentiate between ASP and IIS:

1. ASP (Active Server Pages):

- ASP is a server-side technology used for building dynamic web pages and web applications.
- It allows developers to embed server-side scripts (e.g., VBScript, JavaScript) directly into HTML pages.
- ASP code is executed on the server, and the generated HTML is sent to the client's web browser for rendering.
- ASP provides features like database connectivity, session management, and state management.



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Best Answer of the Question

connectivity, session management, and state maintenance to create interactive web applications.

2. IIS (Internet Information Services):

- IIS is a web server software developed by Microsoft that hosts and serves web applications.
- It is responsible for processing incoming HTTP requests from clients (web browsers) and serving the appropriate responses.
- IIS supports various web technologies, including ASP, ASP.NET, PHP, and others.
- It handles tasks like managing virtual directories, security settings, request handling, and process isolation.

In summary, ASP is a server-side technology used to create dynamic web pages, while IIS is the web server software that hosts and serves the



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data-driven web applications



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the web server software that hosts and serves those web applications. ASP runs within IIS and allows developers to build interactive and data-driven web applications.

b) Explain the virtual directory properties:

Virtual directories are used to map URLs to physical directories on a web server. When a request is made for a URL associated with a virtual directory, the web server serves the content from the mapped physical directory. Virtual directories have various properties that can be configured in Internet Information Services (IIS). Some of the essential properties include:

1. Alias (Name): The name by which the virtual directory is referenced in the URL. For example, if the alias is "images," the URL would be "http://example.com/images."

2. Physical Path: The file system path to the physical directory on the server's disk where

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would be <http://example.com/images/>.

- 2. Physical Path:** The file system path to the physical directory on the server's disk where the content for the virtual directory is stored.
- 3. Access Permissions:** Specifies the level of security and permissions required to access the virtual directory's content. Options include Read, Write, Execute, and None.
- 4. Directory Browsing:** Determines whether the contents of the virtual directory can be listed and browsed when no specific resource is requested. If enabled, users can see a list of files in the directory.
- 5. Application Settings:** Designates whether the virtual directory should be treated as an application with its own configuration and application pool.



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Best Answer of the Question

- a. Explain about request object and session object.
- b. Differentiate between application object and server object.

Expert approved answer

a) Request Object and Session Object:

1. Request Object:

- The Request object is a fundamental part of server-side web development, including ASP and ASP.NET.
- It represents an incoming HTTP request from a client (usually a web browser) to the server.
- The Request object contains information about the request, such as the URL, HTTP method (GET, POST etc.), headers, cookies, f



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Best Answer of the Question

about the request, such as the URL, HTTP method (GET, POST, etc.), headers, cookies, form data, and query string parameters.

- Developers can use the Request object to access and process data sent by the client, such as form submissions, URL parameters, and cookies.
- It allows developers to handle client input, process form data, and make decisions based on the information provided in the request.

2. Session Object:

- The Session object is used to maintain stateful information about a user's interaction with a web application across multiple HTTP requests.
- Unlike the Request object, which handles data for a single request, the Session object retains data throughout the user's session on the website.



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the website.

- When a user visits a web application for the first time, the server assigns a unique session ID and creates a corresponding Session object.

- The Session object is then used to store data specific to that user, allowing the server to remember information like user preferences, login status, or shopping cart contents.

b) Differentiation between Application Object and Server Object:

1. Application Object:

- The Application object is specific to ASP (not ASP.NET) and is used to store and share data across multiple users (clients) of a web application.

- It represents data shared among all users

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- It represents data shared among all users accessing the application, essentially making it a global storage mechanism.
- The Application object is created when the application starts and remains available until the application is terminated or restarted.
- It is suitable for storing data that needs to be accessed by all users, such as application settings, cached data, or shared resources.

2. Server Object:

- The Server object is available in both ASP and ASP.NET environments and provides various utility methods and properties related to the web server's functionality.
- It is a part of the server-side scripting environment and allows developers to perform tasks such as server-side includes, file operations, URL redirection, and reading request headers.



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object does not store data across different



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Best Answer of the Question

- The Server object is available in both ASP and ASP.NET environments and provides various utility methods and properties related to the web server's functionality.
- It is a part of the server-side scripting environment and allows developers to perform tasks such as server-side includes, file operations, URL redirection, and reading request headers.
- Unlike the Application object, the Server object does not store data across different users' sessions. Instead, it assists with handling server-specific tasks and operations.
- The Server object is useful for server-side functionality, but it does not serve as a global storage mechanism like the Application object.



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Best Answer of the Question

a. Explain about file access with ASP with example.

b. What do you mean by debugging ASP? Explain.

Expert approved answer

a) File Access with ASP:

In ASP, you can perform file access operations to read from or write to files on the server's file system. File access is useful for tasks like reading configuration files, logging data, or creating dynamic content based on file content. Here's a simple example of file access with ASP:

Example: Reading Data from a Text File

Suppose you have a text file named "data.txt" located in the same directory as your ASP file,

and you want to read its contents.

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Welcome to file access with ASP



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Best Answer of the Question

located in the same directory as your ASP file, and it contains the following content:

Hello, ASP!

Welcome to file access with ASP.

Now, you want to read the content of this file and display it on a web page using ASP. Here's the ASP code to achieve this:

```
<%
```

```
Dim filePath
```

```
filePath = Server.MapPath("data.txt") ' Map the  
file path relative to the ASP file
```

Open the file for reading

```
Dim objFSO, objFile, fileContent
```

```
Set objFSO =
```

```
Server.CreateObject("Scripting.FileSystemObject")
```

```
Set objFile = objFSO.OpenTextFile(filePath, 1) ' 1: For reading
```

Read the content of the file

```
fileContent = objFile.ReadAll
```

```
Close the file objFile.Close Set objFile =
```

```
N
```



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```
Set objFSO = Nothing
```





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Best Answer of the Question



```
Close the file objFile.Close Set objFile =  
Nothing  
Set objFSO = Nothing  
%>
```

```
<!DOCTYPE html>  
<html>  
<head>  
<title>File Access with ASP</title>  
</head>  
<body>  
<h1>File Content:</h1>  
<pre><%= fileContent %></pre>  
</body>  
</html>
```

b) Debugging ASP:

Debugging ASP refers to the process of identifying and fixing errors or issues in the ASP code to ensure that the web application functions correctly. Debugging is essential during the development phase to detect and



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during the development phase to detect and resolve coding errors, logic flaws, and unexpected behaviors. Here's how debugging works in ASP:

- Printing Output: You can use ``Response.Write`` or ``Response.WriteLine`` to output variable values or messages directly onto the web page for debugging purposes.
- Message Boxes: In client-side scripts (e.g., JavaScript), you can use ``alert`` or ``console.log`` to display messages or variable values in a popup or the browser console.
- Debugging Tools: Integrated Development Environments (IDEs) like Visual Studio provide sophisticated debugging tools that allow you to set breakpoints, inspect variables, step through code, and analyze the program flow during runtime
- A breakpoint is a marker set by the developer in the code at a specific line where

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Best Answer of the Question

sophisticated debugging tools that allow you to set breakpoints, inspect variables, step through code, and analyze the program flow during runtime

- A breakpoint is a marker set by the developer in the code at a specific line where they suspect an issue or want to pause execution for inspection.
- When the ASP page is accessed in a debug mode (usually through the IDE), the execution of the code will pause at the breakpoint, allowing the developer to examine variable values and the program's state.
- When an exception (error) occurs during code execution, the ASP page can be configured to display detailed error messages or the error can be logged for later analysis.



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Best Answer of the Question

- a. Explain the sending and receiving e-mail with ASP with example.
- b. Explain the components of ASP.

Expert approved answer

a)

To send and receive emails with ASP, you can use the built-in `CDO.Message` object (Collaboration Data Objects) provided by Microsoft. CDO allows you to create and send email messages using SMTP (Simple Mail Transfer Protocol) and also retrieve emails using POP3 (Post Office Protocol 3) or IMAP (Internet Message Access Protocol). Below is an example of how to send an email using ASP:

Example: Sending an Email with ASP

```
<% Dim objCDO, objConfig, objMessage
```



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Set objCDO =



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Best Answer of the Question

```
<% Dim objCDO, objConfig, objMessage
```

```
' Create CDO.Message object
```

```
Set objCDO =
```

```
Server.CreateObject("CDO.Message")
```

```
' Set email configuration
```

```
Set objConfig =
```

```
Server.CreateObject("CDO.Configuration")
```

```
objConfig.Fields.Item("http://schemas.microsoft.com
```

```
= 2 ' Use SMTP to send email
```

```
objConfig.Fields.Item("http://schemas.microsoft.com
```

```
=
```

```
"your_smtp_server" ' Replace with your SMTP  
server address
```

```
objConfig.Fields.Item("http://schemas.microsoft.com
```

```
= 25 ' SMTP server port
```

```
objConfig.Fields.Update
```

```
Set objCDO.Configuration = objConfig
```

```
' Set email properties
```

```
objCDO.From = "sender@example.com"
```

```
objCDO.To = "recipient@example.com"
```

```
objCDO.Subject = "Test Email from ASP"
```

```
o
```

```
using
```



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Best Answer of the Question

```
objCDO.To = "recipient@example.com"  
objCDO.Subject = "Test Email from ASP"  
objCDO.TextBody = "This is a test email sent  
using ASP."
```

```
' Send the email
```

```
objCDO.Send
```

```
' Release objects
```

```
Set objCDO = Nothing
```

```
Set objConfig = Nothing
```

```
%>
```

b)

ASP is a server-side scripting technology used for building dynamic web applications. It comprises various components that enable web development. The essential components of ASP are:

1. ASP Engine: The ASP Engine is responsible for processing ASP code embedded in HTML pages and dynamically generating the final HTML.



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2. Server Side Scripting Language: ASP



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for processing ASP code embedded in HTML pages and dynamically generating the final HTML to be sent to the client's browser.

2. Server-Side Scripting Languages: ASP supports various server-side scripting languages, such as VBScript (Visual Basic Scripting Edition) and JScript (Microsoft's version of JavaScript). These languages are used to embed server-side logic and interact with the server's resources and databases.

3. ActiveX Data Objects (ADO): ADO is a data access component in ASP used to interact with databases. It enables developers to connect to databases, execute queries, and retrieve or manipulate data.

4. Request Object: The Request object represents an incoming HTTP request from the client's browser. It provides access to various properties like URL parameters, form data, cookies, and headers sent by the client.

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Used to send output back to the client's



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with databases. It enables developers to

connect to databases, execute queries, and retrieve or manipulate data.

4. Request Object: The Request object represents an incoming HTTP request from the client's browser. It provides access to various properties like URL parameters, form data, cookies, and headers sent by the client.

5. Response Object: The Response object is used to send output back to the client's browser. Developers use it to write content, set HTTP headers, and manage cookies.

6. Session Object: The Session object is used to store and maintain user-specific data across multiple HTTP requests during a user's session on the website.



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Best Answer of the Question

a. Explain the client-side scripting with practical example.

b. What do you mean by Microsoft Net framework? Explain with example.

Expert approved answer

a)

Client-side scripting refers to scripts written in languages like JavaScript that run directly on the client's web browser. It enables developers to add interactivity and dynamic behavior to web pages without requiring server round-trips.

Here's a practical example of client-side scripting using JavaScript to create a simple "To-Do List" application:

HTML Code:

```
<!DOCTYPE html>
```

```
<!--
```



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Best Answer of the Question

```
<!DOCTYPE html>
<html>
<head>
<title>Simple To-Do List</title>
</head>
<body>
<h1>My To-Do List</h1>
<input type="text" id="taskInput"
placeholder="Enter task...">
<button onclick="addTask()">Add
Task</button>
<ul id="taskList"></ul>

<script src="scripts.js"></script> <!-- Include
the JavaScript file -->
</body>
</html>
```

JavaScript Code (scripts.js):

```
function addTask() { // Get the input value
var taskText =
document.getElementById("taskInput").value;
```

```
if (taskText != "") {
```



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```
var li = document.createElement("li");
```



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Best Answer of the Question

```
document.getElementById("taskInput").value;
```

```
if (taskText !== "") {
```

```
// Create a new list item (li) element
```

```
var li = document.createElement("li");
```

```
// Create a text node with the task text
```

```
var textNode =
```

```
document.createTextNode(taskText);
```

```
// Append the text node to the list item
```

```
li.appendChild(textNode);
```

```
// Add the list item to the task list (ul)
```

```
document.getElementById("taskList").appendChil
```

```
// Clear the input field
```

```
document.getElementById("taskInput").value
```

```
= "";
```

```
}
```

```
}
```

b)

The Microsoft .NET Framework is a

c



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Microsoft that provides a runtime environment



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Best Answer of the Question

The Microsoft .NET Framework is a comprehensive platform developed by Microsoft that provides a runtime environment and a set of libraries for building and executing applications. It enables developers to create a wide range of software, including web applications, desktop applications, mobile apps, and services.

Example: C# Console Application

```
using System;
namespace HelloWorldApp
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Hello, World!");
        }
    }
}
```

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Best Answer of the Question

```
Console.WriteLine("Hello, World!");  
}  
}  
}
```

1. The .NET Framework includes the Common Language Runtime (CLR), which serves as the runtime environment for executing managed code.

2. Developers use programming languages like C#, VB.NET, or F# to write code that targets the .NET Framework.

3. The example above demonstrates a simple "Hello, World!" program written in C#. The ``Main`` method is the entry point of the program.

4. The ``Console.WriteLine`` method outputs the text "Hello, World!" to the console.



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