

B.Sc Sem.-3 Examination

CC-202

Computer Science

October-2024

[Max. Marks : 70]

Time : 2-30 Hours]

Q1(A) Explain the ASP.NET Page Life Cycle. How can you optimize performance by intervening at specific stages? (7)

Q1(B) Describe the differences between Web Forms and MVC in ASP.NET. When would you choose one over the other? Provide examples. (7)

OR

Q1(A) How does the ASP.NET MVC routing mechanism work? Explain with an example how you can customize routes to support complex URL patterns. (7)

Q1(B) Discuss the role of ViewState in ASP.NET Web Forms. How can ViewState impact the performance of an application, and how can it be managed or minimized? (7)

Q2(A) Explain how you would implement custom authorization and authentication in an ASP.NET MVC application using both the built-in membership provider and a custom solution. (7)

Q2(B) What are HTTP Handlers and HTTP Modules in ASP.NET? How can they be used to modify the behavior of a web application? (7)

OR

Q2(A) Discuss the concept of dependency injection (DI) in ASP.NET Core. How does it differ from traditional DI mechanisms in .NET Framework? Provide an example of configuring DI in an ASP.NET Core application. (7)

Q2(B) Explain how caching works in ASP.NET. Discuss different types of caching and scenarios where each type would be most effective. (7)

Q3(A) How would you implement a custom model binder in ASP.NET MVC? Discuss a scenario where a custom model binder is necessary. (7)

Q3(B) Describe the role of Global.asax in an ASP.NET application. How can you handle application-level events like Application_Error and Session_Start effectively? (7)

OR

Q3(A) Explain how ASP.NET Core implements middleware. Describe the request pipeline and how you would create custom middleware to handle a specific task. (7)

Q3(B) Discuss the role of the Web API in ASP.NET. How would you secure a Web API, and what are the best practices for handling authentication and authorization in Web APIs? (7)

Q4(A) How can you manage state in an ASP.NET application across multiple servers in a web farm? Discuss strategies like SQL Server session state and distributed caching. (7)

Q4(B) Explain the process of publishing and deploying an ASP.NET Core application. What are the key considerations to ensure the application runs smoothly in different environments? (7)

OR

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- Q4(A) How can you use SignalR in an ASP.NET application to create a real-time web application? Provide a detailed example scenario. (7)
- Q4(B) Discuss the differences between ASP.NET Identity and the traditional Membership system. How would you migrate an existing application from Membership to ASP.NET Identity? (7)
- Q5 MCQ Attempt any seven out of twelve.(2 Marks each) (14)**
- 1) Which of the following is true about the Session object in ASP.NET?
 - a) It is shared across all users
 - b) It is used to store user-specific data
 - c) It is automatically cleared after each request
 - d) It is stored on the client-side
 - 2) What is the default session timeout in ASP.NET?
 - a) 10 minutes b) 20 minutes c) 30 minutes d) 60 minutes
 - 3) Which method is used to force all validation controls on a page to validate their data?
 - a) Page.Validate()
 - b) Page.ValidateAll()
 - c) Validation.Validate()
 - d) Validation.CheckAll()
 - 4) What is the purpose of the ViewState in ASP.NET?
 - a) Store user credentials
 - b) Preserve page and control values between postbacks
 - c) Manage session state
 - d) Handle database connections
 - 5) Which directive is used to include user controls in an ASP.NET page?
 - a) @Page b) @Import c) @Control d) @Register
 - 6) Which of the following is NOT a valid ASP.NET state management technique?
 - a) Application State b) ViewState c) Cookies d) URL Query Strings
 - 7) Which of the following file types is compiled into a .NET assembly when building an ASP.NET application?
 - a) .aspx b) .css c) .js d) .html
 - 8) What is the extension of a web user control file in ASP.NET?
 - a) .ascx b) .aspx c) .asmx d) .ashx
 - 9) Which of the following methods is used to kill a user's session in ASP.NET?
 - a) Session.End()
 - b) Session.Quit()
 - c) Session.Abandon()
 - d) Session.Terminate()
 - 10) In which event of the page life cycle, the server-side code is first executed?
 - a) Page_Load
 - b) Page_Init
 - c) Page_PreInit
 - d) Page_PreRender
 - 11) Which of the following elements is mandatory in an ASP.NET Web.config file?
 - a) <appSettings> b) <connectionStrings> c) <system.web> d) <customErrors>
 - 12) Which of the following is not an ASP.NET data-bound control?
 - a) GridView b) DetailsView c) Repeater d) Label

ALL THE BEST
