

### Long Questions

1. Define state management in ASP.Net Core. Discuss about server side state management strategies with suitable examples.
2. Why state management is required in web applications? Explain about cache client side state management techniques in ASP.Net Core with suitable examples.
3. Explain about dependency injection and IOC Container in ASP.Net Core with suitable example.
4. Discuss the differences in the process of program compilation and execution in .Net Framework and .Net Core. List the important features of .Net Core.
5. Discuss about ADO.Net and important classes in ADO.Net. Explain the process of retrieving all records of a RDBMS table in a console application. (Assume your own database and tables)
6. What is ORM? Discuss about Entity Framework Core and EF Core Development approaches.
7. Explain the process of adding EF Core to an application with example.
8. Discuss about authentication and authorization in ASP.Net Core application with suitable examples.
9. Discuss about Identity Framework in ASP.Net Core. Explain it's importance with suitable example.
10. What is the importance of exception handling? Discuss about try, catch, finally and throw keywords in C# with suitable examples.
11. Discuss about delegates and events in C# with examples.
12. Discuss about LINQ in .Net. Define expressions with example. Write a program to demonstrate LINQ.
13. Differentiate between Abstract class and Interface in C#. Write a program to demonstrate run time polymorphism in C#.
14. Discuss about MVC pattern. Discuss in detail about Controllers in ASP.Net Core MVC.
15. Write the process and source codes to create an ASP.Net Core MVC CRUD application.
16. Write the codes to demonstrate login and logout feature in ASP.Net Core.

### Short Questions

17. What are properties in C#? How they are different from methods? Write a program to demonstrate properties.
18. How indexers are different from array? WAP to demonstrate indexer in C#.
19. What are structure in C#? WAP to demonstrate structure in C#.
20. What is use of enum in C#? WAP to illustrate the concept.
21. Discuss about custom exception handling in C# with example.
22. WAP to read the contents of a file and write to another file.
23. WAP that takes strings from keyboard and write them to a file.
24. WAP to demonstrate exception handling using try, catch and finally blocks.
25. What is the use of throw keyword in C#? Explain with suitable example.
26. What are exceptions? Why they should be handled?

27. What is multicast delegate? Explain with example.
28. Discuss about .Net Architecture. What are CLR and CIL?
29. What is routing? Discuss about attribute routing and conventional routing.
30. What are DbContext and Data model in EF core?
31. What are roles, policies and claims in authorization of ASP.Net Core application?
32. Discuss about hosting and deploying of ASP.Net Core application.
33. WAP using jQuery to validate a form.
34. WAP to add two numbers using Angular.
35. WAP to add two numbers using React.
36. Differentiate between ViewBag, ViewData and TempData.
37. Discuss about Razor pages and Razor syntax with suitable examples.
38. Define named and positional attribute parameters with suitable examples.
39. Explain about tag helpers with example.
40. What do you mean by model binding and model validation? Describe about different model binding sources.
41. Explain about Single Page Applications and SPA frameworks.
42. What do you mean by containerization? Discuss about Docker.
43. How ASP.Net Core applications are published to Azure cloud.
44. Describe about App Servers and Hosting models.
45. Describe the process of adding authentication to apps and identity service configuration.
46. Explain about different types of C# constructors.
47. WAP to display “BSc CSIT “ 100 times using Razor syntax.
48. Write short notes on:
  - a) Sealed class
  - b) Method overriding
  - c) Method overloading
  - d) Method hiding
  - e) base keyword in C#
  - f) readonly and const keywords
  - g) .Net CLI
  - h) \_ViewImports and \_ViewStart files
  - i) Principle of Asynchrony
  - j) ASP.NET Core Architecture
  - k) Cross-site Scripting attacks
  - l) SQL Injection attacks
  - m) Cross-site Request Forgery (CSRF)
  - n) Open Redirect Attacks
  - o) Kestrel
  - p) Hosting models