(3 Hours) [Total Marks: 100

N. B.: (1) **All** questions are **compulsory**.
  (2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
  (3) Answers to the **same question** must be **written together**.
  (4) Numbers to the **right** indicate **marks**.
  (5) Draw **neat labeled diagrams** wherever **necessary**.
  (6) Use of **Non-programmable** calculators is **allowed**.

1. Attempt *any two* of the following: 10
a. Explain Increment & Decrement operators in C#.
b. List and explain the major events in global.asax file.
c. What is Namespace? Explain System namespace.
d. What are the types of CSS? Explain.

2. Attempt *any three* of the following:
a. Discuss Boxing and Unboxing in the context of value types and reference types.
b. Explain Write () and WriteLine() Methods with examples.
c. What is an exception? Explain exception handling in c#.
d. Explain the functioning of while loops with an example. When do you use break and continue statements inside a while loop?
e. What are parameter arrays? Explain.
f. State four important features of a constructor. Also list various types of constructors available in c#.

3. Attempt *any three* of the following: 15
a. What is the role of Just-In-Time(JIT) compiler? Explain.
b. What are delegates? Discuss the steps involved in creating and using a delegate.
c. Explain Assembly with its components.
d. What is selector in CSS? Explain various types of CSS selectors.
e. Write short note on Common Language Runtime(CLR) in .Net.
f. What are the benefits of Garbage Collector? Explain.

4. Attempt *any three* of the following: 15
a. Explain at least five properties of CheckBox Control.
b. What is the use of web.config file in ASP.NET application.
c. What are the ASP.NET Page Life Cycle Events?
d. What is Caching? What are the types of Caching in Asp.Net? Explain
e. Explain any five Web Server Controls.
f. What is the code behind and inline code?

5. Attempt *any three* of the following: 15
a. Write short notes on Application state and Session state.
b. Explain Master Page & Content Page with example.
c. What do you mean by cookies? Explain its advantages and Disadvantages?
d. Explain TreeView and SiteMapPath navigation controls.
e. What are the validation controls in Asp.Net? Explain any two with suitable example.
f. Explain the work of session state in ASP.Net.

6. **Attempt** *any three* **of the following:** **15**
a. What is data provider? Explain.
b. Explain GridView control with its properties.
c. Explain the basic attributes of FormView control.
d. Explain SqlDataSource control with its propteries.
e. List all the steps in order, to access a database through ADO.Net.
f. What is Authentication? What are the ways to authenticate a user in ASP.NET?

7. **Attempt** *any three* **of the following:** **15**
a. What are LINQ operators? Explain any four LINQ operators.
b. What is LINQ ? What are the advantages of LINQ.
c. What is AJAX? How AJAX helps in improving user interactivity with the application interface?
d. Explain UpdatePanel Control with suitable example.
e. Explain JQuery with its advantages.
f. What are the steps to perform simple JQuery in ASP.Net application?