(2½ hours)

Total Marks: 75

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 three* of the following:**   15
  a. What are .NET languages? Explain various features of C#.
  b. What is property? Explain read-write property with proper syntax and example.
  c. Explain static constructor and copy constructor with examples.
  d. Explain one dimensional and two dimensional arrays with proper syntax and example.
  e. Define inheritance. Explain single inheritance with example.
  f. List various reference types in c#. Also explain boxing operation with example.

2. **Attempt *any three* of the following:**   15
  a. What are .aspx files? Explain code behind class file in detail.
  b. Explain each of the following in brief:
    i. Web forms
    ii. Post back
    iii. Page rendering
    iv. Page Load event
    v. Page PreRender event
  c. List any four category of server controls. Explain common properties of web server controls.
  d. Explain the basic functionality of each of the following webserver controls.
    i. CheckBox
    ii. TextBox
    iii. DropDownList
    iv. Menu
  e. Write short note on various validator controls.
  f. What are rich controls? Briefly explain about Calendar and AdRotator controls.

3. **Attempt *any three* of the following:**   15
  a. Explain exception handling mechanism with proper syntax and example.
  b. Describe session state variables in asp.net.
  c. Explain state management through persistent cookies.
  d. Describe the features and benefits of master pages in asp.net.
  e. What is a theme? How does it work?
  f. What are the three different ways to use styles on web pages? Explain various category of style setting in New Style dialog box.

4. **Attempt *any three* of the following:**   15
  a. What is data binding? Explain repeated value data binding with example.
  b. Write any three similarities between FormView and DetailsView controls. Explain about item template of form view.

c. Explain data binding with a dictionary collection.
d. Explain various style properties of GridView control.
e. Briefly explain following features of GridView control.
   i. Sorting
   ii. Paging
   iii. Selecting a row
   iv. Editing a row
f. Describe asp.net provider model and direct data access method.

5. **Attempt *any three* of the following:**   15
a. Explain different types of authentication in asp.net.
b. What is XML? What are its basic characteristics?
c. What is the use of XMLTextWriter class? Explain various methods of this class.
d. What is authorization? Explain adding authorization rules in web.config file.
e. Explain the working of update progress control in detail.
f. Explain about implementation of timed refreshes of update panel using timer.