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:
a. What is .NET framework? Explain in detail .NET framework along with a neat diagram.
b. What is garbage collection? How does it work in .NET?
c. Explain compiling and execution of a C\# program.
d. What is difference between value type and reference type in C\#?
e. Explain inheritance along with its types.
f. What is an ArrayList? State its methods and properties.
2. Attempt any three of the following:
a. Write a short note on ASP.NET page life cycle.
b. List and explain various types of files which are used in an ASP.NET application.
c. Write a short note on AdRotator control.
d. Explain Calendar control with example.
e. What is meant by validation of data? How to use ASP.NET validation control to validate the user input?
f. Explain any two Site Navigation Controls in ASP.NET.
3. Attempt any three of the following:
a. Explain Page Tracing in ASP.NET with an example.
b. Write a short note on Query Strings state management technique.
c. Develop ASP.Net web application to count total number of visitors visited to an ASP.NET website.
d. What is CSS? List and explain types of CSS.
e. What is a mater page? Explain the advantages of using master page.
f. What are themes? Explain procedure of creating and using themes in a website.
4. Attempt any three of the following:
a Draw and explain ADO.NET data provider model with diagram.
b Explain (i) ExecuteNonQuery (ii) ExecuteScalar (iii) ExecuteReader
c Write a short note on Data Binding.
d Explain SqlDataSource control.
e What is difference between DeatilsView and FormView control?
$f$ Compare: Data Adapter and Data Reader.
5. Attempt any three of the following:
a. Explain the working of AJAX.
b. What is XML? List the various XML classes.
c. What do you mean by authentication and Authorization? Explain its types.
d. Explain ScriptManager and Timer controls.
e. Explain AutoCompleteExtender in ASP.NET AJAX Control Toolkit.
f. How web.config file is used to implement forms authentication in ASP.NET?
