Reg. No. :

Question Paper Code: 31922

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2016

Elective

Computer Science and Engineering

01UCS909 - C# AND .NET FRAMEWORK

(Regulation 2013)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Apply boxing and un-boxing to an integer value.

2. Compare structure with class.

3. Define sealed classes and mention their use.

4. Compare and contrast abstract class and interfaces.

5. Give the code segment to fill dataset.

6. List the components in ADO.NET object model.

7. Differentiate postback events with non-postback events.

8. Describe the database connection string using web.config file.

9. Distinguish between marshal by value and marshal by reference.

10. What is the purpose of WSDL? How will you view WSDL file?

PART - B (5 x 16 = 80 Marks)

11. (a) (i) Create a C# program to merge two arrays into a single sorted array. (8)

    (ii) Develop a C# program to count the number of words in a line of text. (8)

Or

    (b) (i) Explain the concept of jagged arrays in C# using suitable example. (8)

    (ii) Create a class to represent a vector (a series of integer values). Include constructors and methods to perform the following tasks.

        (1) To create the vector
        (2) To display the elements
        (3) To multiply by a scalar value (8)

12. (a) (i) Describe in detail about interfaces. (8)

    (ii) Recommend a class polar which describes point in the plane using polar coordinates, radius and angle. A point in polar coordinates is shown below. Include an overloaded operator method to add two objects of polar.

    $X = r * cos(a), \ Y = r * sin(a), \ a = atan(y \ / \ x), \ r = sqrt(x * x + y * y).$ (8)

Or

    (b) (i) Write a C# program to add two complex numbers. (8)

    (ii) Summarize the exception handling mechanism in C#. Write user defined exceptions for overflow and stack empty exceptions in a class created for stack data structure. (8)

13. (a) Discuss about ADO.NET architecture. Build a windows based applications to accept the reservation details of a train ticket and to store the details in a database table. Use drop down list box to choose the train number and name. Accept source and destinations in text boxes. Allow the user to enter the date of journey one month in advance. (16)

Or

    (b) (i) Write a C# program for creating a window based calculator application with your own GUI. (8)

2

31922

(ii) Write a program using ADO.NET to connect to the employee database and read the names of the employees. The employee table has 5 fields namely name, age, empid, designation and pay. Implement the following in datasets

    (1) Adding a row

    (2) Deleting a row

    (3) Updating a row   (8)

14. (a) (i) Illustrate the use of validation controls in ASP.NET.   (8)

    (ii) Design a registration form and create a session variable for the user name.   (8)

Or

(b) (i) Describe the steps in creating web services in .NET technology.   (8)

    (ii) Create an employee database in XML. Read the file from .NET web application.   (8)

15. (a) Define the process to create a strong name for a .NET assembly. Identify a shared assembly by attaching the strong key file.   (16)

Or

(b) Quote the purpose of remoting and describe the steps involved in the process of creating remoting application.   (16)

————————————

31922

31922