Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_

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**End Semester Examination – Nov/Dec – 2018**

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| **Code :** | **14CS2054** | **Duration :** | **3hrs** |
| **Sub. Name :** | **C# AND .NET PROGRAMMING** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Explain the following C# programming aspects with example.   1. out 2. ref 3. params 4. virtual 5. override | CO1 | 10 |
| b | Define an interface named Idisplay with methods area() and display(). Inherit the classes such as rectangle and circle from the interface. Write appropriate C# code to invoke the methods. | CO1 | 10 |
| (OR) | | | | |
| 2. |  | Explain the concept of operator overloading with a console application in C# and perform the following operations on a Vector class (x and y are members).  V1+V2, V1-V2, V1<V2, Vector to int | CO1 | 20 |
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| 3. |  | Explain the types of delegates with C# code. | CO1 | 20 |
| (OR) | | | | |
| 4. | a. | Write a C# program to capture the names and phone numbers using Groups in Regular Expression.  **Input:**Anand 9446578987 Babu 9876543210 Carmel 9123455678 | CO3 | 8 |
| b. | Demonstrate the implementation of Stack and Queue collection with C# code. | CO3 | 12 |
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| 5. |  | Write a C# program to read the name, age, password, email from the user and display it on the screen. The program should throw user defined exceptions for the following cases.   1. If the length of the name exceeds 12 characters 2. If the age value is less than 25 3. If the password not match 4. If the email doesn’t contain ‘@’ symbol | CO3 | 20 |
| (OR) | | | | |
| 6. | a. | Describe the structure of assembly. Write a C# code to create modules, assemblies and load them in the application. | CO3 | 10 |
| b. | Explain the mechanisms to automate the freeing of unmanaged resources. | CO3 | 10 |
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| 7. |  | Describe the mechanisms used to handle the synchronization issues in multithreading. Write a C# program to synchronize two threads using multithreading. | CO2 | 20 |
| (OR) | | | | |
| 8. | a. | Write a C# code for displaying the Student details from database using SQLDataReader and SQLDataAdapter. | CO2 | 6 |
| b. | Develop a windows application with a C# code that creates a form with label, textbox, button and handle the button click event. | CO2 | 14 |
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|  | | **Compulsory**: |  |  |
| 9. |  | Design a registration form using ASP.NET. Write the necessary code to validate the form with the validation server controls for the following constraints. After validation the data has to be inserted in the database using ADO.NET and display the details in the GridView.   1. Name field is required 2. Password and retype password field are same 3. Age filed is between 23 to 30 4. Mobile number must be 10-digit | CO2 | 20 |