

National School of Business Management
BSc (Hons) Software Engineering, Networks & Security
1st Year 2nd Semester Examination
Software Engineering
Sample Paper

Answer all questions

Time: 03Hrs

A - Write the Correct answer (short answers) (1 X 20 = 20 Marks)

1. C# is an Object Oriented Programming Language, what does it means?
.....
2. Data type to keep 'true' or 'false' values is called,
.....
3. The difference between float and double data type is,
.....
4. What is the purpose of Console.ReadLine() method?
.....
5. What is the access level of "public" access modifier?
.....
6. A class is mainly consist of two parts. Name them
.....
7. What are the main four pillars (core concepts) of Object Oriented Programming?
.....
8. What do you mean by 'Data Hiding'?
.....
9. What do you mean by 'IDE'?
.....
10. What is the use of Garbage Collection?
.....

Write single code line to do the followings.

11. To define string variable which is private and non-static?
.....
12. To take console user input and convert into decimal variable "cost".
.....
13. Define public static variable called Batch using string data type.
.....
14. Define a variable and assign the value 45.9.
.....
15. Define decimal array "mynumbers" which can hold 20 elements.
.....
16. Define a multidimensional array with 3 rows and 4 columns
.....

17. Declare a function which accept two integers as arguments and display the area
.....
18. How to define a while loop which iterates for 100 times?
.....
19. How to assign the value selected in a ListBox to a variable?
.....
20. Write statements using 'if' condition to find and display the highest number out of three numbers. (Assumption: The values are already input and stored in the variables x, y & z).
.....

B - Write short answers (2 x 20 = 40 marks)

1. What is type casting? Give an example.
2. How to print following output?
4 x 1 = 4
4 x 2 = 8
4 x 3 = 12
4 x 4 = 16
4 x 5 = 20
3. What are the main components of Visual Studio .net IDE?
4. What is the purpose of switch case statement?
5. What is the meaning of return values from a method?
6. What is inheritance?
7. What is method overloading?
8. What is the use of a static method?
9. Describe the accessibility modifier "private"
10. Define class constructors?
11. Write required code for class "Banker" with two constructor methods.
12. What is the purpose of **Static** variable? Show the declaration of an integer static variable called Count.
13. Write code and explain the differences between while and do while loops.
14. What is the difference between a variable and an object?
15. Why we use 'finally' in exception handling?
16. What does it mean by 'Just In Time' compiler

17. Write a program to read the number series 10,20,30,... 100 in to a listbox.
18. Write a program to take a decimal input from a text box and find the power (x^2).
19. Briefly explain Class Library.
20. Briefly explain Microsoft Intermediate Language.

C - Write answers (4 x 10 = 40 marks)

- 1) Briefly explain about “**Common Language Runtime**” and “**Foundation Class Library**”
- 2) Briefly explain “**ADO.NET**” and “**ASP.NET**”
- 3) Use a sample code and explain the differences between ‘private’ and ‘public’ access modifiers.
- 4) Write a program in which accept two argument as parameter from the user and returns four output value as add, subtract, multiplication and division using class called Calculator containing Add(), Substract(), Mul(), Div() methods.
- 5) Write a function (Console application) in C# to find the sum of the Even Numbers and Odd Numbers separately from 1 to N, where the value of N is input as a command line argument.
- 6) Code the following class using C#.

SavingsAccount
Private AccNo
Private Owner
Private Balace
Public void ShowBalance()

- 7) Write a program to find area of shapes like rectangle, circle and triangle using the concept of classes.
- 8) Explain the purpose of each of the statement in the following code

```
public class Database
{
    public static OleDbConnection GetConnection()
    {
        OleDbConnection con = new OleDbConnection();con.ConnectionString =
        @"Provider=Microsoft.Jet.OLEDB.4.0;Data Source=E:\NSBM\Database1.mdb";
        return con;
    }
}
```

9) Explain the purpose of each of the statement in the following code

```
string sql = "SELECT * FROM Employee";  
con.Open();  
OleDbDataAdapter adapter = new OleDbDataAdapter(sql, con);  
DataSet ds = new DataSet();  
adapter.Fill(ds, "Employee");  
dataGridView1.DataSource = ds;  
dataGridView1.DataMember = "Employee";  
con.Close();
```

10) What is an Exception? Write a sample program to show the structure of exception handling