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17CS564

## Fifth Semester B.E. Degree Examination, July/August 2021 Dot Net Framework for Application Development

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions.*

- 1
  - a. What is Namespace? How namespace is used to solve name-clashing problem. Explain with example. (06 Marks)
  - b. Explain the following with examples:
    - (i) Statements
    - (ii) Identifiers
    - (iii) Keywords (06 Marks)
  - c. Write a C# program to find first 'N' Fibonacci Numbers. (08 Marks)
  
- 2
  - a. Define scope of a variable. Explain the following with example.
    - (i) Local scope
    - (ii) Class scope (10 Marks)
  - b. Write a C# program for adding two numbers using try and catch for the following exceptions:
    - (i) Format exception
    - (ii) Overflow exception (10 Marks)
  
- 3
  - a. Differentiate between structure and class with an example. (04 Marks)
  - b. Write a C# program for swapping two numbers using overloading concept. (08 Marks)
  - c. Explain how arguments are passed as method parameters by using the following:
    - (i) The REF keyword
    - (ii) OUT keyword (08 Marks)
  
- 4
  - a. Define an array. Write a C# program to sort the given 'N' numbers in ascending orders using arrays. (10 Marks)
  - b. Write a C# program for adding two matrices and store the sum in another matrix. (10 Marks)
  
- 5
  - a. Define a params arrays. List out the restrictions on params array with suitable example. (10 Marks)
  - b. What is the need for virtual functions? Explain with example. (10 Marks)
  
- 6
  - a. Write a C# program to demonstrate multiple interfaces. (08 Marks)
  - b. Write a C# program to demonstrate garbage collector. (08 Marks)
  - c. Explain in detail dispose method and IDisposable interface. (04 Marks)
  
- 7
  - a. What are properties? Write a C# program to demonstrate properties considering Class Name: customer, fields as int custid, bool status, string Cname, double Balance. (10 Marks)
  - b. Define Indexers. Write a C# program to demonstrate indexers considering Class Name: Employee and fields as int ENo, double salary, string Ename, Job, Dname, Location. (10 Marks)

- 8 a. Define generics. Write a C# program to compare two parameters using generics method. (10 Marks)  
b. List out differences between arrays and collections. (05 Marks)  
c. List out important design consequences of Dictionary <Tkey, Tvalue> class. (05 Marks)
- 9 a. What is an iterator? Write a C# program to implement an enumerator by using an iterator. (10 Marks)  
b. What is a delegate? Explain with example. (05 Marks)  
c. What is an event? Explain with example. (05 Marks)
- 10 a. What is LINQ? Write a C# program that illustrate selecting, filtering and ordering data using LINQ. (10 Marks)  
b. Write a C# program to overload '+' operator to add 2 instances of a class. (10 Marks)

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