AK-2010250   Seat No. _____

B.C.A. (Sem. V) Examination

October/November – 2010

CS-26 : Programming with C#

(New Course)

Time : **3 Hours**]   [Total Marks : **100**

1   Attempt any **four** :   **20**

    (i)   What is .Net? List features of .Net and differentiate Managed Code and Unmanaged Code.

    (ii)   What do you mean by array? Differentiate Multidimensional arrays and jagged arrays with suitable example.

    (iii) What is namespace in C#? List out various namespace with its functionality.

    (iv) Explain Garbage Collector and Automatic Memory Management.

    (v)   What do you mean by exception? Explain how exceptions are handled in C# with suitable example.

    (vi) What do you mean by sealed class in C#? Explain with suitable example.

2   Attempt any **four** :   **20**

    (i)   What is indexer? Explain overload indexer with suitable example.

    (ii)   What do you mean by delegate? What are types of it? Explain multicast delegate with example.

    (iii) What is pointer? How function pointers can be use in C# with suitable example.

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(iv) What is thread? Explain how to set thread priority with suitable example.

(v) Explain method and operator overloading with suitable example.

(vi) What is event? Explain it with suitable example.

3 Attempt any **four** :   20

(i) What is collection? Explain any one collection type in detail.

(ii) What is reflection? What are the needs of it?

(iii) Explain Just-in-Time compilation process.

(iv) Explain briefly Generic List and Generic HashSet.

(v) Explain Thread Synchronization with suitable example.

(vi) What is Sorted List? How Sorted List is used in C#?

4 Attempt any **two** :   20

(i) What is ADO.NET? Explain architecture of ADO.NET in detail.

(ii) List out Mouse and Key Events for the Window Form Control and explain any five with suitable example.

(iii) Explain following controls in detail:

   (a) RichTextBox

   (b) TextBox

   (c) TreeView

   (d) ListView

5 Attempt any **two** :   20

(i) Consider following table "Emp_Salary" and perform following task:

Field of Emp_Salary table are (Emp_ID, Basic_Salary, HRA, DA, TA, PF, Net_Salary).

   (a) add record to the above table

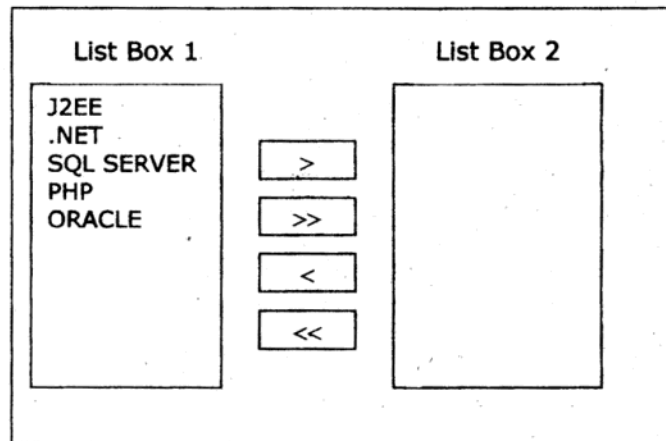   (b) edit record based on emp_id to the above table

(c)   delete reocrd based on emp_id from the above table

(d)   Display all records in Data Grid Control.

Calculate

DA = 5% of basic salary, HRA = Rs. 2,500/- fix, TA = Rs. 1,000/-, P.f. = Rs. 760/-

Net_Salary = Basic_Salary + HRA + DA + TA + PF)

(ii)   Create Class MYAPP with attributes num1, num2 and num3. Write a program to overload + and – operator to add and subtract from object.

(iii)   Create a following form with two ListBox and four Buttons.

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┌─────────────────────────────────────────────┐
│   List Box 1              List Box 2          │
│   ┌──────────────┐        ┌──────────────┐   │
│   │ J2EE         │        │              │   │
│   │ .NET         │  ┌───┐ │              │   │
│   │ SQL SERVER   │  │ > │ │              │   │
│   │ PHP          │  └───┘ │              │   │
│   │ ORACLE       │  ┌───┐ │              │   │
│   │              │  │ >>│ │              │   │
│   │              │  └───┘ │              │   │
│   │              │  ┌───┐ │              │   │
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│   │              │  └───┘ │              │   │
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└─────────────────────────────────────────────┘
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Perform list item navigation as per the click on the button.