4/H-80 (xii) (PR) (Syllabus-2015)

2017

(April)

COMPUTER APPLICATION

(Honours)

(VB.Net Programming)

(BCA-403)

(Practical)

Marks : 30

Time : 3 hours

The questions are of equal value

Answer ONE question from each Section

SECTION—I

1. Design a Windows form with appropriate control to generate a list Fibonacci series within a given range of numbers (which is to be entered by the user). Display the result in a Listbox.

2. A line of text, e.g., 'practice makes a man perfect' is entered by the user. Write a console program to print the shortest and longest words so contained in the sentence.

SECTION—II

3. Develop an application that creates a text file 'file1.txt'. Copy the content of 'file1.txt' to a new file 'file2.txt'.

4. A publishing company maintains records with the following information :

   Name of Author, Author Code, Name of Book, Book ID, Year of Publication

   Develop a Windows application to add and view records.

SECTION—III

5. Create a database in a database server with two tables—Biodata and Marks. The table Biodata contains the fields—Name, RollNo(N, 5)(RollNo is unique), Gender(C, 1), State(C, 15), District (C, 15), Place(C, 15), Class(C, 3), Dob(Date), Caste(C, 10) and the table Marks contains the fields—RollNo(N, 5), Physics(N, 2), Chemistry (N, 2), Maths(N, 2). Develop ASP page(s) to add and delete records from the tables.

6. Create a Web service for checking whether the number is a prime number. Also develop a Windows application that uses the Web service.

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4/H–80 (xii) (PR) (Syllabus–2015)

2018

(April)

COMPUTER APPLICATION

(Honours)

(VB.Net Programming)

(BCA–403)

(Practical)

Marks : 30

Time : 3 hours

Answer **three** questions, taking **one** from each Unit.
Each question carries 10 marks

UNIT—I

1. Write a VB.NET program to take a twelve-digit phone number in the following format—starts with +91, followed by three-digit STD code and last seven digits is the phone number. The entire phone number should be taken as a single input. The program should verify if the entered input is in the correct format otherwise an error message is displayed. If the format is correct then the output should display the STD code and the phone number separately in a message box.

2. Write a program to take two $n \times m$ matrices as inputs and display the product of the two matrices as output. The dimensions of the matrices, i.e., m and n are also to be taken as input. The program should verify if the two matrices are compatible or not before it finds the product. A subroutine should be used for finding the product.

UNIT—II

3. Write a console application to write prime numbers between 1 and 100 to a text file. The program should then read from the file and display the contents of the file on the screen.

4. Create a database table, books, with the following fields—Title, Author, publisher and subject. Write a program to perform the following tasks :

   (a) Add book details and search for all books by a selected author.

   (b) The books table must be created and filled with some sample data from the DBMS software.

(Continued)

UNIT—III

5. Write an ASP.NET program to display n terms of the Fibonacci series. The number of terms should be taken as input.

6. Create a database table—Menu, to store the following details of dishes served at a restaurant—name of the dish, category (starter/main/ dessert), price per serving, calories per serving and description. Write an ASP.NET program to add data to the menu table.

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4/H–80 (xii) (PR) (Syllabus–2015)

2019

(April)

COMPUTER APPLICATION

(Honours)

(VB.Net Programming)

(BCA–403)

(Practical)

Marks : 30

Time : 3 hours

Answer *any* **three** questions, taking **one** from each Section. Each question carries 10 marks

SECTION—I

1. Write a program to find the sum of the following series up to n terms, where n is to be taken as input.

$$\frac{1}{2} - \frac{1}{4} + \frac{1}{16} - \frac{1}{256} + \cdots$$

2. Write a program to take input for an $m \times n$ array of integers and display its transpose. Both m and n are to be taken as input as also the elements of the array.

If the array is $A = \begin{matrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{matrix}$ its transpose is $\begin{matrix} 1 & 4 & 7 \\ 2 & 5 & 8 \\ 3 & 6 & 9 \end{matrix}$.

SECTION—II

3. Create a class *Square*. The class should have one private integer member variable—*length*. Define property procedures for this member variable. Provide overloaded constructors—one no-argument constructor and a parameterized constructor that initializes the value of the *length*. Define methods—*computeArea* and *computePerimeter* to calculate the area and perimeter of the square. Define method *displaySquare* to display the length, area and perimeter of the square. Finally, write a program to test this class.

4. Write a program to read a line of text from a file and count the number of words and characters in the line and write the same to another file.

SECTION—III

5. Create a database *MOVIEDB* containing one table, *Movie*, with the following fields—*Movie Code*, *Movie Title*, *Actors* and *Release Year*. Write an ASP.NET program to take input for these details and add the same to the table. The Movie Code should not be entered by the user but automatically generated by the program such that no two movies can have the same code.

6. Write a web service, *MathOperations*, which contains functions to perform the following mathematical operations :

(a) x raised to the power of y—power(x, y),

(b) square of x—square(x) and,

(c) x times y—times(x, y), where x and y are integers.

Write a program that uses the web service *MathOperations*.

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2
3.14
7
21.98 5 6
7 1
153.36

4/H–80 (xii) (PR) (Syllabus–2015)

2022

(May/June)

COMPUTER APPLICATION

(Honours)

(VB.Net Programming)

(BCA–403)

(Practical)

Marks : 30

Time : 3 hours

The questions are of equal value

Answer **three** questions, taking **one** from each Section

SECTION—I

1. Given $a = 0$, $b = 1$, and $c = 2$ are the first three numbers of some sequence. All other numbers of this sequence are generated from the sum of their three most recent predecessors. Write a program to generate this sequence up to nth term, where n is taken as input by the user.

2. Write a program to find the sum of each of the two diagonals of an $m \times m$ matrix using the concept of two-dimensional arrays. Write a program that asks for the value of 'm' as well as the values of elements of the $m \times m$ array. The output should display the matrix and the sum of the two diagonals.

SECTION—II

3. Create a class titled—GeometricObject with a data member—color, and a method displayDetails which displays the color of the GeometricObject. Create a derived class circle from GeometricObject class with data members—radius and methods—getArea and getPerimeter, which calculates and displays the area and perimeter of the circle. Finally, in the main Method, test these classes and their methods.

4. Write a program to take input for a sequence of integers and write them to a text file. The program should then read the integers from the file. Sort them and write the sorted integers to another file.

(Continued)

SECTION—III

5. Create a database with a single table named "Book" with fields—Bookid, Title, Author, Price. Write a menu-driven program (MDI application) to perform the following tasks :

   (a) Add a new book detail

   (b) Edit book details based on the book title

6. A hardware store maintains records with the following information :

   Unique item code, item name, item description, quantity of the item in stock, cost of the item. Create a database table to store the appropriate data. Next, create a web application to make provisions to perform the following functions :

   (a) Search for a particular item based on item code

   (b) Add a new item to the database

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