AUTUMN END SEMESTER EXAMINATION-2016

3rd Semester B.Tech & B.Tech Dual Degree

WEB TECHNOLOGY

IT-2003

(Regular-2015 Admitted Batch)

Time: 3 Hours   **Full Marks: 60**

Answer any Six questions including question No.1 which is compulsory.
The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable
and all parts of a question should be answered at one place only.

1. a) Write down three different ways to set black as the background   [2 × 10
        colour of a page.

    b) Explain the use of <iframe> tag with suitable example.

    c) Explain the functionality of each attribute of <input> tag when
        it's type attribute is as follows
        (i) text   (ii) hidden   (iii) password   (iv) reset

    d) Write the output for the following code, if there is any
        exception or error then specify it:

```
class Bitwise
    {
            public static void main(String [] args)
            {
                    int x = 11 & 9;
                    int y = x ^ 3;
                    System.out.println( y | 12 );
    } }
```

    e) Write the output for the following code, if there is any
        exception or error then specify it:

```
public class Example
    {
            static int j;
```

(1)

```
static void methodA(int i)
    {
    boolean b;
    do
        {
                    b = i<10 | methodB(4);
                    b = i<10 || methodB(8);
        }while (!b);
}
static boolean methodB(int i)
    {
        j += i;
        return true;
    }
public static void main(String[] args)
    {
        methodA(0);
        System.out.println( "j = " +j );

    }
}
```

f) Write the output for the following code, if there is any exception or error then specify it:

```
class A {
        public static void main(String x[]){
            int z[][]={{1,2,3,4},{1,2,3}};
            System.out.println(z[1].length+" "+z.length);
        }
}
```

g) What is final class? How it is helpful in java programming?

h) Write down the output.

```
class A  {
        A(){}
        public   String toString(){
                return "D";

        }
        public static void main(String x[]){
                A []p= new A[5];
                int i;
                for (i=0; i<p.length; i++){
                System.out.println(p[i])
                } }
}
```

(2)

i) Define a stream. Differentiate between a byte oriented and a character oriented streams.

j) Differentiate between for each loop & iterator.

2. a) Write a program in html to design following Student table with minimum 4 rows: [4

Rollno	FirstName	LastName	sex	Dob	Address	Branch	Semester	Fee

b) Define a class Employee having data members: Name, deptName, basicSalary and UID and member functions: getdetails() and displaydetails(). [4

The rules for the salary calculation are as follows

Earnings=basic +DA(125% of basic) +HRA(15% of basic)
Deduct = 12% of basic
Net Salary = Earnings - Deduct

Write a program in java to print salary slip for at least three employees.

3. a) Write a program in java to create an abstract class Figure having abstract method area(), and data members length, breadth? Derive classes Triangle, Rectangle having member function area() and find area of triangle and rectangle by function overriding concept. [Note: subclasses do not contain any data members]. [4

b) Design the following registration form in HTML. [4

Name   -textfield
Photo   -image
Address   -textarea
Password   -password field
DateOfBirth   -drop down list
Gender   -radio buttion (male, female)
Hobbies   -checkbox (minimum four hobbies)
Submit   -button

4. a) Write a program in java to perform the following operations on StringBuffer class. Explain each function separately: i) ensureCapacity() ii) replace() iii) delete() iv)insert() [4

b) Write a program in java to input characters from the keyboard. Convert lowercase letters to uppercase & vice-versa and [4

(3)

display them. If the user-entered character is a blank then throw an user defined exception called BlankCharacterException.

5. a) Define Collection. Write a program in java with the following functions and also explain each of them separately using ArrayList: [4

 i) remove() ii) contains() iii)retainAll()

 b) Implement an applet class having two buttons named as RED and YELLOW. When the RED button is clicked , the background colour of applet window is set to red. Similarly when the YELLOW button is clicked , the background colour of the applet window is set to YELLOW. Write down the necessary HTML code to execute the applet. [4

6. a) Write a program in java to read data from one file and write it to another file, and also compare both files. A compare function compares two files and if the data in both the files are the same then display (files are equal) otherwise display files are not equal. [4

 b) How interface reference variable is used to facilitate run time polymorphism? Explain with suitable example. [4

7. a) Explain the functionality of drawRect(),drawOval() and drawArc() methods of Graphics class with suitable examples. [4

 b) Implement a class Number having data member value (int) and a method int find_factorial() which is used to return the factorial of the data member value. The above class is defined within a package Factorial. Implement an application class Demo to calculate the formula $^nC_r = n!/(n-r)!$ where the Factorial package is imported . [4

8. Write short notes on any four of the following? [4 × 2

 a) Style sheet Types

 b) Adapter class

 c) Use of finalize() method

 d) PrintWriter class

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